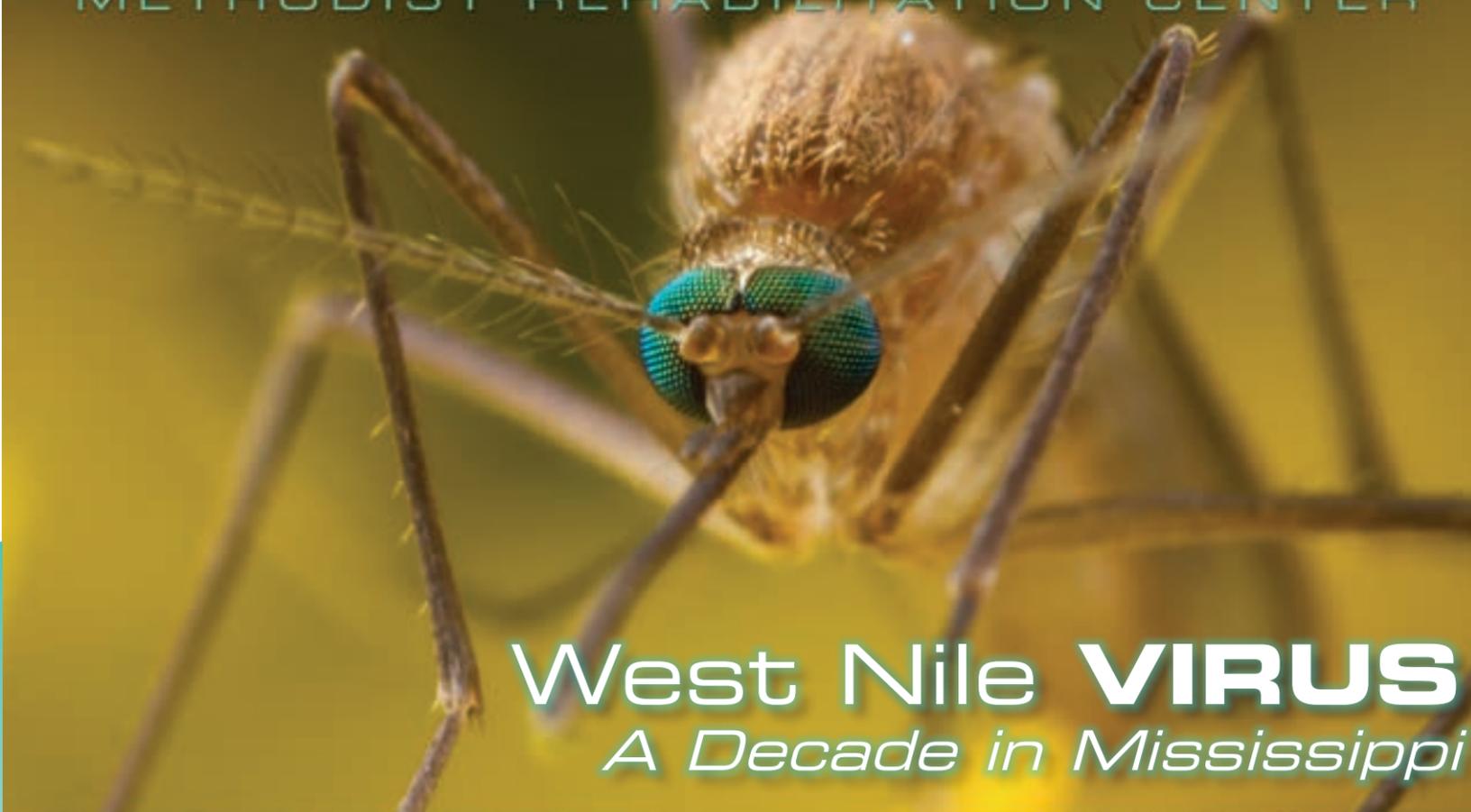


ways AND Means

METHODIST REHABILITATION CENTER



West Nile **VIRUS** *A Decade in Mississippi*

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Shaquille **VANCE**
Paralympic Silver Medalist



Michael **SHELBY**
Research in Action



Kala **HARVEY**
Brain Injury Survivor



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A DECADE OF DETECTIVE WORK

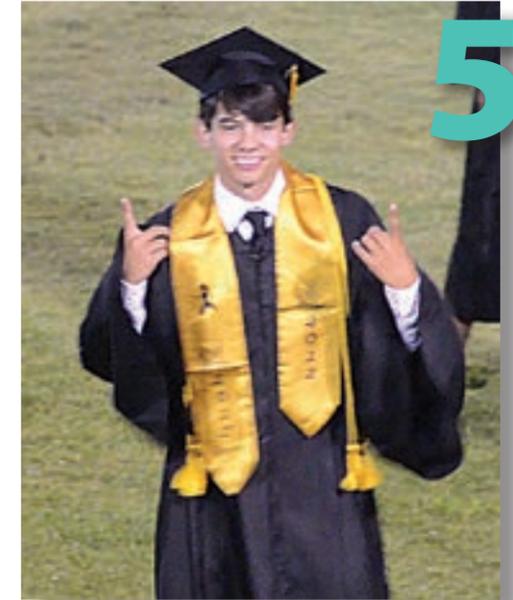
In the 10 years since West Nile virus first invaded Mississippi, two Methodist Rehab researchers have shed new light on the disease's impact.



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A HUNTER AT HEART

A former engineer utilizes his skills to pursue his passion for hunting after a debilitating stroke.



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GRADUATION DAY

Methodist Rehab staff helped a paralyzed teen realize his goal to walk at high school graduation.



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SILVER CHEETAH

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Guided by her mother's faith, a Delta woman keeps improving some four years after a devastating brain injury puts life on hold.

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Mark A. Adams - **President and Chief Executive Officer, Methodist Rehabilitation Center**

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Methodist Rehabilitation Center provides comprehensive medical rehabilitation programs for people with spinal cord and brain injuries, stroke and other neurological and orthopedic disorders. The 124-bed state-of-the-art hospital in Jackson has twice been designated a Traumatic Brain Injury (TBI) Model System site by the National Institute on Disability and Rehabilitation Research and is also the only hospital in Mississippi twice named one of America's best by U.S. News & World Report.

Mission Statement | In response to the love of God, Methodist Rehabilitation Center is dedicated to the restoration and enhancement of the lives of those we serve. We are committed to excellence and leadership in the delivery of comprehensive services.

The Challenge

Chance favors only the prepared mind. I've always liked that quote by chemist and microbiologist Louis Pasteur. Although reportedly an average student, he became a renowned researcher. He did not invent "germ theory," but his understanding of it led Pasteur to develop the process known as "pasteurization." He also developed the process for many vaccinations, such as those for anthrax, cholera, small pox and rabies.

To me, Pasteur's quote means that opportunity comes when you least expect it, but are prepared to recognize it. To create a similar "framework of discovery" in our hospital setting, we've purposefully fostered a commitment to continuous education and the communication of shared experiences. Simple discoveries or revelations may arrive fairly often in such a learning environment. But less often, that moment arrives when the "prepared mind" recognizes a situation that is truly innovative or of significant scientific importance. The resulting cell phone text message might be "OMG!"

Methodist Rehab's Center for Neuroscience and Neurological Recovery is our research department built around a "framework of discovery" and an atmosphere where "chance favors only the prepared mind."

Rather than build a lab where researchers work separately and apart from clinicians, we developed a working model that puts our researchers in the mainstream of patient care. There, they gain real-life experience that expands their critical thinking and provides focus and application for their research work. They learn from the clinicians and the clinicians from them. And patients are the beneficiaries of the collaboration.

An example of the success of our research model and an "OMG" moment is the West Nile virus (WNV) research highlighted on pages 32-39. The groundbreaking work was prompted by the plight of three WNV patients crippled by a strange paralysis that was brought to the at-

ention of our scientists by experienced clinicians.

A decade after being the first to link the virus to polio-like damage to the spinal cord, our scientists continue to investigate the impact of WNV on the nervous system. And it's their desire to help patients overcome the debilitating effects of the mosquito-borne disease that is central to their passion for this line of study.

The same dynamic is at the heart of Michael Shelby's remarkable recovery following a paralyzing spinal cord injury. Turn to pages 50-55 to learn how the knowledge of our researchers and the experience of our medical staff helped the high school student prevail over what could have been a life-changing injury.



Research also played a pivotal role in Kala Harvey's miraculous transformation, which is described on pages 40-49. The brain-injured college freshman seemed destined for life in a nursing home before her mother insisted on a transfer to Methodist Rehab.

Not every rehab hospital has the resources to treat someone in a minimally-conscious state. But our researchers have participated in national studies on effective drug therapies for such patients, and our staff knows from experience not to underestimate the poten-

tial of people with severe brain injuries. "Wherever we were, they met us," said Kala's mom. And I can't think of a better motto for a rehab staff ever ready to help patients realize their goals

Every day our researchers gain more knowledge through their work, and our clinicians become more experienced. Patients will continue to benefit from the services we provide through our model for collaboration between researchers and clinicians.

Mark A. Adams
President and Chief Executive Officer
Methodist Rehabilitation Center



The Wilson Research Foundation met in May 2012 in the BankPlus Conference Center at Methodist Rehab Center. From left, Methodist Rehab President and CEO Mark Adams, Dick Molpus, Dave Robinson, Ginny Wilson Mounger, Matt Holleman, Gene Delcomyn, Juanita Lester, Sam Lane, Dr. Marion Wofford, Ed Kossman, Sally Carmichael, Dr. Robert Smith, Methodist Rehab Medical Director Dr. Sam Grissom and Wilson Foundation Executive Director Chris Blount. Not shown are foundation board members Martha Lyles Wilson, Dean Miller and Mary Helen McCarty Griffis.

Generosity in Action

Wilson Research Foundation grants \$650,000 to Methodist Rehabilitation Center

The Wilson Research Foundation recently awarded \$650,000 for patient-focused research projects at Methodist Rehabilitation Center in Jackson, a grant made possible by the generosity of 1,000-plus Mississippians.

The foundation, a supporting organization of Methodist Rehab, received contributions through its annual Walk & Roll fundraiser and gifts from individual and corporate donors.

"Our donors have been incredibly generous, and this will help Methodist Rehab introduce new therapies and better understand what works best to help our patients recover ability and quality of life," said Wilson Foundation Executive Director Chris Blount.

"Our donors have a direct con-

nection to our work; most are past patients or have had loved ones or employees here as patients," Blount said. "They often tell me that they give to us because of the profound impact this center has in Mississippi since most of our patients return home and back to productive lives."

The 2012 grant will fund current and expanded studies into ways to improve walking, arm function and cognitive function after a stroke, brain injury, spinal cord injury or other disabling illness or injury.

"This support from the Wilson Foundation helps us develop and evaluate promising new therapies, and to challenge the effectiveness of traditional clinical practices," said Dr. Dobrivoje Stokic, Methodist Rehab's administrative director of research.

The Wilson Research Foundation

is a 501(c)(3) nonprofit organization established in 1989 by Mary Ann and Mac McCarty in honor of the late Earl R. Wilson, founding chairman of Methodist Rehab, and his wife Martha Lyles Wilson.

The foundation has awarded more than \$4 million in clinical research grants, all raised locally through contributions.

"Most research programs in hospitals depend only on federal or other external grants," Stokic said. "This is cyclical and unreliable. We are blessed that research at Methodist Rehab is supported mainly through philanthropy because it allows us to attract and retain world-class research and clinical talent. And the benefits of this approach range from innovations in patient care to over 200 manuscripts and book chapters published to date." ❧

Employees of the Year

Mattie Woodberry *Clinical Services*

For many people, nursing is a career choice.

But for Mattie Woodberry, it's more of a calling.

Methodist Rehab's latest Clinical Employee of the Year has always had a soft spot for people in need, says Susan Jefferson, nurse manager for the hospital's spinal cord injury program.

"I remember one young patient on a ventilator who didn't have a lot of family support, and he would be alone at night. And Mattie

would sit with him and pray with him because he was scared.

"She also used to come up here and volunteer on her off day to wash and braid people's hair. And whatever they needed, she would buy out of her own money. She always wants to give something back."

Initially, Woodberry thought she would serve others as a teacher. But when nursing beckoned, she knew it was the right fit.

"I do enjoy taking care of people," she said. "I like to make a difference."

Woodberry first started at Methodist as a certified nurs-

ing assistant and also spent time as a unit clerk. Then she set her sights on becoming a licensed practical nurse (LPN), a goal that her coworkers encouraged.

"I had a lot of mentors that really motivated me," she said. But Jefferson says Woodberry did all the hard work, somehow managing to juggle class assignments, while also working at Methodist Rehab.

"She wanted to better educate herself and grow," Jefferson said. And with Methodist Rehab's support, Woodberry earned her LPN degree in 2003 and her registered nurse degree in 2006.

But she's probably still best known for her TLC—tender loving care.

"She just has this soothing spirit with everyone she comes in contact with," Jefferson said. "She is always kind and very attentive to the patients."

Woodberry said she cherishes her role as an encourager. And nothing means more than learning a patient appreciates her support.

"A lot of times, they'll see a smile on your face and say: You made me feel so good. And that is the most important thing." ♣

It was the night of Methodist Rehab's annual employee recognition dinner, and Thelma Scott had a question for her baby sister Teresa Scott.

"If you won Employee of the Year, what would you do?" Thelma asked.

"If I won, everybody on State Street would hear me," Teresa answered.

She wasn't kidding.

"When my name was called, I couldn't move at all," Teresa said.

"All I could do was sit there and holler. It was a surprise and a shock."

Thelma was by her sister's side during the excitement, and it's fitting that she got to be part of the fun. She's a rehab tech for the spinal cord injury program at Methodist Rehab, and it was her call that let Teresa know about an opening in the hospital's environmental services department.

Teresa got the job in 2010, and within two years was named Support Services Employee of the Quarter. Still, she longed to do more for patients than cleaning their rooms.

"I've always wanted to help people," Teresa said. And that caring na-

Teresa Scott *Support Services*

ture caught the attention of Lauren Dukes, nurse manager for the brain injury program.

"I could see her potential and work ethic," Dukes said. So she asked Teresa if she would train to become a rehab tech, a job that entails helping brain injury patients with personal tasks such as bathing and getting dressed.

"She has a great personality and is a very caring, loving, compassionate employee who truly goes above and beyond to provide patients with excellent care," Dukes said.

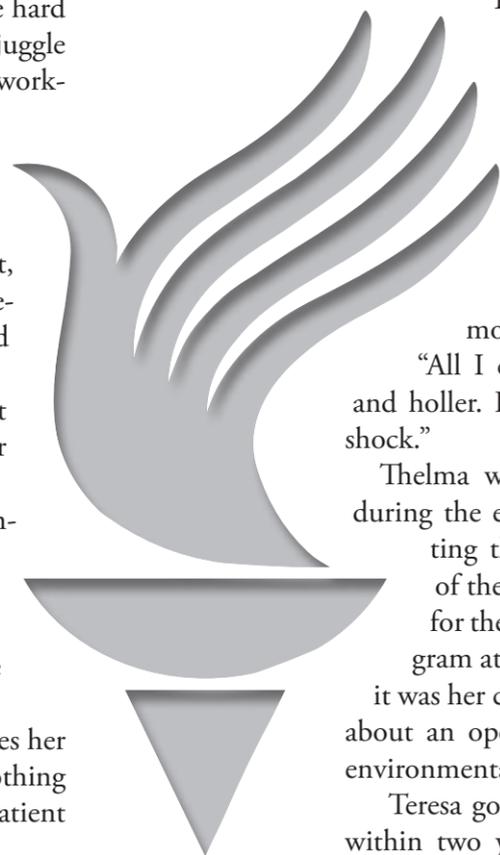
A youth director at Sandhill Missionary Baptist Church, Teresa is a self-proclaimed "people person" who is known for her smile.

And there's no doubt that Methodist patients love her. "We had a patient who wanted to pay her and actually sent a check here to show her appreciation," Dukes said.

Of course, the check was a s

returned, but Teresa didn't mind. She says she already has her reward. Her satisfaction comes from seeing patients overcome their injuries and return home.

"When they come in, some can't hardly get up and you end up doing everything for them," she said. "Then on discharge, you might just have to tie their shoes—they are almost to where they were before." ♣





Now I can... stay competitive

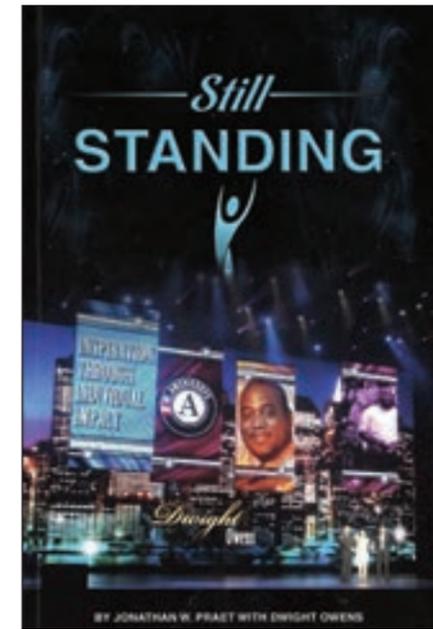
Will Lamkin played both football and baseball in college before a 2008 auto accident left him a quadriplegic.

At the time, he had no idea his injury would lead him to a sport that would rival his collegiate pastimes as his favorite.

“When I started quad rugby, I didn’t even know it existed,” Lamkin said.

Lamkin now fuels his competitive spirit as a member of Methodist Rehab’s Jackson Jags quad rugby team. It’s just one of many sports in the center’s therapeutic recreation program that allow injured athletes to remain active and competitive.

“I had really no idea what to expect, but I just fell in love with it,” Lamkin said.



Now I can...

share my story

“Still Standing” seems an odd title for a book about a guy in a wheelchair. But it makes perfect sense once you meet author Dwight Owens.

After being paralyzed in a wreck caused by a drunk driver, the Hot Coffee native turned his personal tragedy into a platform to empower others. Today, the former teacher is a motivational speaker who mentors the newly disabled, counsels youth in his community and speaks out about the dangers of drunk driving.

“Disability is a setback, not a life sentence,” says Owens, who credits Methodist Rehab staff with helping him realize his potential.

“Their philosophy is tough love, with the emphasis on the tough part,” Owens says. “They taught me to push myself as hard as I could to get as far as I could.”



Now I can... savor life's little pleasures

Crystal Walley has always loved putting in the garden, playing with her pets and spending time with family.

But the activities have new meaning in the wake of a West Nile virus (WNV) infection that paralyzed and nearly killed the Wayne County mother of two. "You don't appreciate all the little things until they are taken away," she says.

Now back on her feet, Walley is forever grateful for the groundbreaking discoveries being made at Methodist Rehab's Center for Neuroscience and Neurological Recovery. Center scientists were the first to link West Nile virus to a polio-like paralysis, and Walley says the expertise of renowned researcher Dr. Art Leis helped save her life.

"There's not another in the world that can compare to him," she said. "He truly loves what he does, and he is darn good at it."

Worth the wait

Custom-built wheelchair improves quality of life for Indianola man

By Carey Miller

At Methodist Rehabilitation Center's Seating and Wheeled Mobility Clinic, physical therapist Allison Fracchia does whatever it takes to fit patients with disabilities with the best equipment for their needs.

She even went back to the classroom to help 51-year-old Dean Whitehead of Indianola.

When his unique posture cried out for a wheelchair with custom-molded seating, she got the certification necessary to design and recommend a custom system known as Ride Designs.

"We could have put him in something else, but to me, the outcome would not have been what it needed to be," Fracchia said.

"We take our time and don't recommend something simply because it would be the quickest thing to do. Sometimes it's worth the wait, and in Dean's case it definitely was."

An accidental gunshot wound left Whitehead a paraplegic at age 11. Then, infected pressure sores in his 20s and 30s led to amputations of his legs and hip region.

The nature of his injuries caused Whitehead to lean to the left. This resulted in many postural problems that affected his functional use of a standard style wheelchair without custom seating.

"It was really labor intensive and slow for Dean to get from one place to another," Fracchia said. "His balance was severely affected when seated in his chair."

Whitehead, who began using a wheelchair in the early 1970s, said he's amazed at the advances now available for people with disabilities.

"Technology changed so much in the last 25 to 30 years that there are things you couldn't have dreamed about that are a reality today," he said.

Even so, Fracchia believes some of his issues could have been avoided.

"If he had been properly seated in a wheelchair and had been provided with a pressure redistribution and positioning cushion, his chances of developing all of the secondary complications would have been minimized greatly," Fracchia said.

When Will Mattern of Flowood's A&A Home Health Equipment began working with Whitehead, he immediately consulted Fracchia, who is one of but a few certified assistive technology practitioners and the only practicing physical therapist that holds a Seating and Mobility Specialist certification in the state.

"I knew over at Methodist Rehab we had more options," Mattern said. "There was more equipment for him to try, and we could test different



For years, Dean Whitehead was unable to hold both of his arms in the air while still staying upright in his wheelchair, something his new custom-built seat allows him to do.

pieces to make sure we would get what was appropriate for him."

Mattern worked closely with Fracchia to build a custom chair to suit Whitehead's lifestyle. One priority was to lighten the load for Whitehead's mother, who is his primary caregiver and was having more difficulty lifting his chair in and out of a vehicle.

"There are people like Dean who

have been dependent on their parents for care their entire lives," Fracchia said. "They are living longer, but in turn, their caregivers are aging and have developed their own medical problems."

Fracchia says the clinic always considers both the goals of the caregiver as well as the wheelchair user when making recommendations. "Funding often limits our choices,"

she said. "Nevertheless, these things should be considered."

Whitehead's new wheelchair is an ultra lightweight frame. Everything from the wheelchair's depth, width, height from the floor and angle of the tires was precisely calculated to accommodate his mobility and positioning needs.

To avoid the wheelchair tipping over—a common problem for peo-

ple who have lost both legs—they devised a clever way to use his favorite camouflage backpack as a counterweight on the front of the chair. This assisted with providing a "balanced" system when Whitehead was seated.

Addressing his severe, left-side lateral lean proved more problematic. "We noticed that no off-the-shelf seating product was going to work



Above: Dean Whitehead poses in his new wheelchair along with, from left to right, physical therapist Allison Fracchia, Lynn Serio of Ride Designs and Will Mattern of A&A Home Health Equipment. Below: Biomedical technician Greg Lauten makes some last minute adjustments to Whitehead's back rest using a belt sander.



for him,” Mattern said. “Allison and I while working together had seen the Ride Design seating system, and we felt that was going to be the best piece of equipment for him.”

When they learned Ride Design required a special certification to recommend the system, A&A Medical arranged for a company representative to fly from Colorado to conduct a class. And Whitehead was invited to be an active participant.

With all of these elements, they were able to construct a chair that was lightweight for independent mobility, while achieving maximum support for proper stability.

The entire process—from his initial evaluation on Oct. 31, 2011 to getting his new chair—took nearly six months. “We told Dean that if he was willing to work with us, it may take up to a year to get everything done,” Fracchia said. “He said it was worth the wait for him.”

He had to wait for one more last-minute adjustment when he came to get his chair on May 7. The back of his custom seat cushion was just about an inch too high for comfort, so Fracchia enlisted the help of Methodist Rehab’s in-house biomedical team.

“We’re able to help out when they’re having difficulties getting a chair just right,” said biomedical technician Greg Lauten. “We have the tools here to do it, and we’re glad to help get our patients happy and comfortable.”

Lauten used a saw and a belt sander to fix the problem, and Whitehead’s chair was soon good to go.

The difference the new chair made was immediately apparent.

I think it is life-changing,” Fracchia said. “I don’t know how long it’s been since he was able to hold both arms in the air and still maintain his position in the chair without falling over. He’s now able to use both arms simultaneously to maneuver his wheelchair.”

Whitehead says he was awed by the dedication to helping him.

“It was really something,” Whitehead said. “So many people were involved. I couldn’t believe the time and the effort they put into something like this.”

For more information on Methodist Rehab’s Seating and Wheeled Mobility Clinic, please call 601-936-8838. ♣



A hunter at heart

Outdoorsman uses engineering skills to continue his passion following a debilitating stroke

By Susan Christensen

When Bill Meador began transforming his Hickory farm into a hunter’s paradise, he built one shooting house with a wheelchair ramp.

He wanted to make sure guests with disabilities had a prime place to hunt. “There’s a heater in there, food

plots nearby and you can look in three different directions,” he said.

Of course, he never expected to be the first one to use it. “How ironic is that?” he says.

Paralyzed on his left side by a 2008 stroke, the rugged outdoorsman now gives “roughin’ it” a whole

new meaning. But you won’t catch him wasting time on whining.

“After I came close to dying, a day means more to me than it used to,” says the 69-year-old retired engineer. “I try to make something positive happen every day.”

Lately, he has been inventing

ways to make the great outdoors more welcoming to folks who love hunting and fishing but are hampered by health problems.

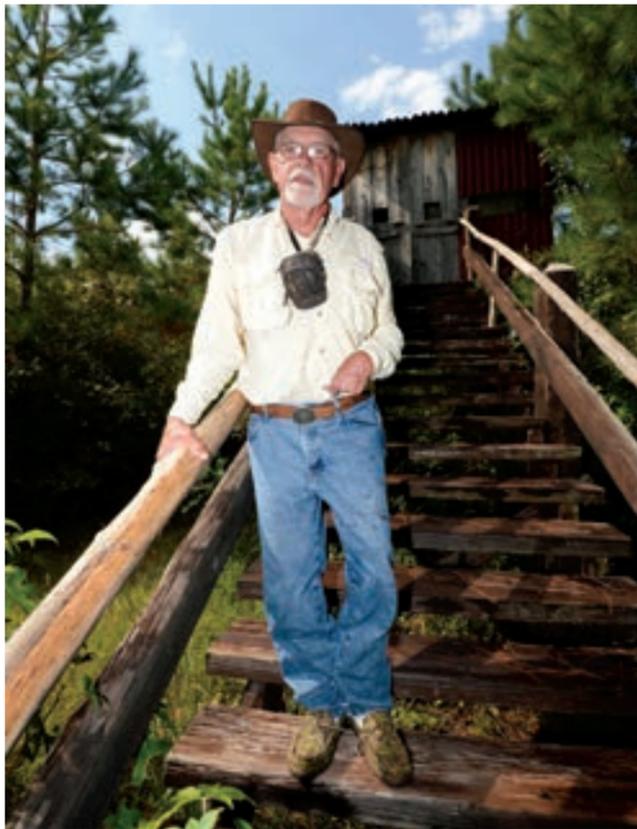
All across his 120-acre property are numerous examples of his ingenuity—a motorized scooter equipped with double back wheels to handle tough terrain, PVC pipes attached to pier rails to hold his rod ‘n’ reels and a foam swimming pool “noodle,” now atop his golf cart windshield and serving as a gun rest.

“My ole pea brain is always thinking,” he said. “Sometimes I get up at 4 o’clock in the morning to sketch something on a piece of paper.”

“If there’s a way to do it, Mr. Meador will find a way,” says Merry Claire Wardlaw, a physical therapist at Methodist Outpatient Rehabilitation in Flo-wood.

Meador underwent both inpatient and outpatient therapy at Methodist Rehab, and from day one his goal was to get back in the woods. So staff helped the avid outdoorsman develop skills to compensate for his paralysis—from strengthening his sound side to increase his balance and endurance to showing him new strategies to accomplish common tasks.

“He was very determined and creative with adapting his environment,” said Methodist Rehab physi-



Bill Meador spent the second anniversary of his stroke in the same shooting house where he suffered a brain bleed on Dec. 17, 2008. At the time, the house had only a ladder. But Meador had a staircase built so he could still access the 12-foot perch.

cal therapist Lisa Indest. “He didn’t have a problem changing the way he did things so he could get back involved in hunting and fishing.”

Methodist’s driver retraining program helped Meador get back behind the wheel and find the right adaptive equipment for his various vehicles. And he says he treasures being able to tool around his property in an electric golf cart.

“I love being here,” he says looking out over a large pond stocked with bream and bass and the rolling terrain that is home to 17 deer

stands. “When I couldn’t drive, I thought I was going to go crazy. I was always an outgoing guy and everything I wanted to do was right here under my fingertips.”

Meador said it was Dec. 17, 2008, when “my whole life changed in a matter of seconds.” He was inside a shooting house, gun in hand, when blood vessels in his brain began hemorrhaging.

“I was sitting in a swivel office chair and the first thing I know I was on the floor,” he said. “I couldn’t get up. I reached over and touched my left arm, and I couldn’t feel it. I said: ‘This is not good.’”

Meador reached for his cell phone and punched a pre-programmed number to call his neighbor. “I think I’ve had a stroke,” he said.

Help soon arrived, but rescuers faced a daunting challenge. They had to get a 215-pound man to the bottom of a 12-foot ladder. And Meador says he’ll never forget the burly friend who volunteered to carry him down—never mind that the man was terrified of heights.

Fortunately, a nearby farmer had a fork lift attachment on his tractor that was used to lower Meador to the ground. He was ferried out of the woods on the back of his own four-wheeler and transported to a hospital in Meridian, then transferred to Jackson.



It takes ingenuity to hunt and fish with a paralyzed arm and leg, and engineer Bill Meador has plenty. He uses a hemostat to bait his hook and PVC pipe attached to pier railing to hold his fishing rods. His golf cart—a favorite perch for pug J.J.—is equipped with a foam rest that supports Meador’s rifle while he’s taking aim. His kitchen window makes a pretty good place for target practice, too.



The following year was torturous for an independent soul who had spent little of his life indoors. He was in and out of hospitals, battling setbacks that eventually sent him to a nursing home.

So when he was finally healthy enough to attack rehab, Meador refused to let anything get in the way of getting better. "He had no fear," said Methodist Rehab occupational therapist Suzanne Colbert. "His words to other people were: Don't let anything slow you down. Even if you have only one arm or leg, there's a way to get it done."

On the second anniversary of his stroke, Meador practiced what he preached.

"I was back in the same shooting house with the same shooting rifle and the same chair," he said.

Meador had gotten a friend to build a staircase to the shooting house, and on that day the man left a message on the steps.

"He took a chainsaw and carved Dec. 17, 2010 on one of the steps and below it Mr. Bill," Meador said.

Today, the carving serves as a source of inspiration to others with disabilities.

"I've had two hunts for Outdoors Without Limits and two hunts for handicapped adults and kids," Meador said. "One of the little fellows was 13 years old, and I put him in a place we call the Honey Hole. If you don't see a deer there, it's because you're asleep. He killed a little yearling, and he was so excited you would have thought he had gotten a 10-point buck. It made my day."

For information on hunting at Meadorosa Deer Camp & Lodge, call 601-201-5832. For more information on outpatient rehabilitation following a stroke, call 601-936-8889.



Bill Meador set out to build a barn and wound up with a rustic hunting lodge that's ground zero for all his favorite activities. Since his stroke, he has invited others with disabilities to hunt at Meadorosa Deer Camp & Lodge.



Having two different vehicles allows Methodist Rehab's Driving Rehabilitation Program to accommodate the needs of most any driver with a disabling condition.

License to Drive

Driving Rehabilitation Program helps disabled persons get back onto the road of life

By Carey Miller

The two silver vehicles parked outside Methodist Rehabilitation Center's Outpatient Therapy Center are, at first glance, nothing special.

The van could be mistaken for any average soccer mom's grocery getter, while the sedan appears to be your garden variety Chevy Impala, one of the most popular cars on the road today.

But make no mistake, both are in

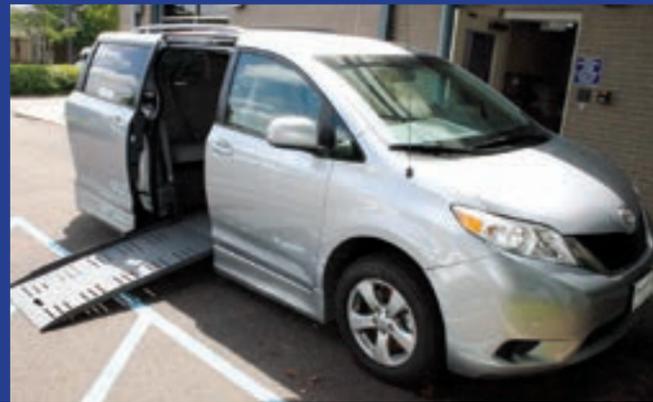
fact packed with the latest advancements in specialized assistive technology that allow disabled persons to regain their independence.

The vehicles are utilized by the center's Driving Rehabilitation Program, which provides driving evaluations and training for people with disabling conditions such as brain injury, stroke, quadriplegia, paraplegia, spina bifida, epilepsy, brain tumors and conditions of aging.

"Driving is one of the highest level activities of daily living—there's a lot of physical and cognitive components to driving," said Ashlee Ricotta, an occupational therapist at Methodist Rehab who administers evaluations for the program. "But, sometimes driving is more feasible than walking, and it opens up a new level of mobility for patients."

The van has been a significant addition because it accommodates

Below: Charles Tennyson of Raymond reviews the features of the Driving Rehabilitation Program's Toyota RampVan XT with occupational therapist Ashlee Ricotta. At right, a look at the van and some of its custom features, like the automatic ramp and custom steering wheel.



Above left: The Driving Rehabilitation Program's Impala allows paraplegic drivers like Corderris Brown of Terry to learn proper wheelchair transfer technique to allow them to drive standard vehicles with minimal modification. Below left: Brown proudly displays his new driver's license. Above: Brown, pictured with occupational therapist Ashlee Ricotta.

patients the program was previously unable to, such as those who have difficulty transferring from a wheelchair.

"That was something we were not able to do with just a car," Ricotta said. "Now, we can evaluate people from their chairs, and it allows us to serve a population that we could not before, mainly spinal cord injury patients."

The van is a 2011 Toyota Sienna Rampvan XT by Braun Ability, which includes a number of standard features to assist disabled drivers and passengers. It has a keychain remote control that also operates the automatic passenger sliding door and automatic foldout ramp.

At the touch of a button, the

rear suspension can be lowered to reduce ramp angle and make it easier to enter and exit the van. It also comes with removable passenger and driver's seats, so that wheelchair users can drive or ride without exiting their wheelchairs.

Handicapable Vans of Jackson further customized the vehicle by installing hand control systems for braking and acceleration, and equipping the vehicle with various assistive steering devices that are matched to each individual driver's needs. They also added a six-way transfer seat for the driver, which slides back and swivels to allow for easier transfers to and from wheelchairs.

Ricotta is pleased that she will now be able to help even more pa-

tients reconnect with something that enhances their daily lives.

"If you see somebody that's just been told they can drive, well, they've gained a feeling of independence that is just immeasurable," Ricotta said. "If they've been cleared to drive—it puts a whole new future out there for them."

Tommy Burrell agrees. An accounting student at Mississippi College, he recently got his license thanks to the program.

"It feels great," he said about getting back in the driver's seat after his injury four years ago. "Now I can use it for getting back and forth to therapy and school, and possibly getting a job."

But while Ricotta says that most

of her patients don't mind using a minivan for training, Burrell has his eye on something a little more his style.

"Right now I'm looking at getting a Dodge Magnum," he said. "I'm 26 years old and a van isn't something I really want to ride around in."

Charles Tennyson, who is currently working to get his license with the program, intends to get his own van because of the freedom it affords him.

"I hope to become more independent where I can go more places and do more things," said Tennyson.

A lower leg amputee following a 2010 accident, Tennyson works at The Speed Shop, an auto racing shop in Jackson, and he owns a number of

race-modified cars and muscle cars.

A minivan isn't exactly the kind of hot rod that usually catches his eye.

But the van's features have won him over, like the ability to enter via the ramp and then get behind the wheel using the six-way transfer seat. This will allow Tennyson to travel alone, as he now needs someone to help stow his wheelchair for him.

"I don't want to have to depend on someone," Tennyson said.

The Impala is the newest of the two vehicles and was also outfitted by Handicapable Vans with many of the same modifications such as hand controls for the right or left side, and a left foot accelerator.

The car is typically used in the program by those with less severe

disabilities, like paraplegia, stroke and amputations.

Corderris Brown of Terry used the sedan to take his driving test at the Rankin County testing station in mid-September.

For the 26-year-old Brown, who became paraplegic at the age of 17 by an accidental gunshot wound, it wasn't about getting back to driving—it was about getting his license for the very first time.

"It was easy coming," he said of learning to drive. "The way Ashlee described how we were going to use it before we got in the actual car, it made it simple."

For more information about Methodist Rehab's driving rehabilitation program, call 601-936-8889.



SILVER CHEETAH

Shaquille Vance brings home silver medal at the 2012 London Paralympics

By Carey Miller

On a particularly hot afternoon in late September, Shaquille Vance stood on the Madison-Ridgeland Academy track surrounded by a crowd of adoring middle schoolers.

They were clamoring to have his autograph emblazoned on the veritable rainbow of running shoes they held aloft.

At that moment, to those children, he was the biggest superstar in the world.

Their eyes fixated on the silver medal he had won in the Men's 200-meter T42 classification race just weeks before at the 2012 Paralympics in London. And their curiosity was captivated by his hi-tech prosthetic running leg, built around a carbon-fiber blade known as a 'cheetah' foot. Methodist Orthotics & Prosthetics fabricated the device for Vance following a 2009 sports injury that forced an

above-the-knee amputation of his right leg. That moment followed a running demonstration and motivational speech Vance delivered to the school's Running Club. It was a moment indicative of the positive power sport has in people's lives—the power to motivate, to lead by example, to inspire.

"I think over time Shaquille has homed in on what he needs as an athlete, but he's also homed in on how he can serve as a powerful motivator for others, that it's more than just his athletic ability that he has to represent," said Jennifer Long, a certified prosthetist at Methodist O&P who has been Vance's sponsor, mentor and confidant. "I think he has grown into being a role model."

"I love being able to inspire the kids to know that life comes with a lot of difficult obstacles, but there is always a way to overcome," Vance said.

Photo by Joe Kusumoto/U.S. Paralympics



Left: Shaquille Vance autographs running shoes for Madison-Ridgeland Academy's Running Club. Above: Vance with Jennifer Long, a certified prosthetist at Methodist Orthotics & Prosthetics. Right: Vance and his rival Richard Whitehead of Great Britain jockey for position in the Men's 200-meter T42 race at the Paralympics (Joe Kusumoto/U.S. Paralympics).

That notion is at the heart of the Paralympics. The slogan of the games is "Spirit in Motion," which the International Paralympic Committee says expresses "the inspirational character of the Paralympic movement as well as elite performance of Paralympic athletes."

It's something that Vance really took to heart as he competed at the Games.

"Every day that I went to the track there were 80,000-plus people there," Vance said. "It made me think a lot about what I did because so many people came out to watch us, there were so many people excited to see guys with disabilities out on the track running and competing at an elite level just like the Olympians."

And while the massive crowd may have helped Vance realize just what it meant to represent both the United States and athletes with disabilities on the world stage, it didn't help to calm the nerves of an athlete getting his first taste of the ultimate level of competition.

He said of the day he ran the 200-meter: "I was walking through the tunnel to the track, and I said, 'This day is really here. I've been working three years for this.'"

When he emerged from the tunnel, he says he was nearly overwhelmed by the cheering crowd. But soon he zeroed in on the laser-like focus many elite athletes strive to achieve.

"By the time I lined up in the blocks, I saw no one," Vance said.

"Everything was a blur. It was time to go. The only thing I really remember is the gun going off and me taking off."

Exactly 25.55 seconds later, Vance had won the silver medal and set a new American record, finishing just fractions behind gold medalist and rival Richard Whitehead of Great Britain.

Vance's performance earned him fans in his U.S. teammates and fellow Methodist Rehab athletes Ryan Estep and Joey Brinson, who both competed in the Games in wheelchair fencing.

"I was watching it—I thought he was going to win! But that British guy really turned it on at the end," said Estep. "To go over there and represent the United States and

Methodist Rehab, I think he did an amazing job. Hopefully all things will go well and we'll see each other again in Brazil [site of the 2016 Paralympics]."

And while Vance admits some disappointment for not getting the gold, he takes pride in his accomplishment.

"At first I didn't know, was I disappointed or was I mad or was I excited, because I got beat? But I took second so that's still winning," Vance said. "Then when I got on the podium in front of 80,000 people cheering for me, I didn't know if I wanted to cry or be happy or thank God—I probably did a little mixture of all of that. It was a feeling I will never forget."

"It's absolutely amazing that at his

first Paralympic experience he won a silver medal," Long said. "It's unbelievable that he's come this far in the two year period that we've been working with him. Methodist O&P can't take credit for his running talent but we've been a big part of his journey."

Methodist O&P's role in that journey was much like the pit crew for a NASCAR racer.

Long was the car chief, personally handling much of the paperwork and logistics involved in getting Vance to London and complying with the myriad requirements of the sport.

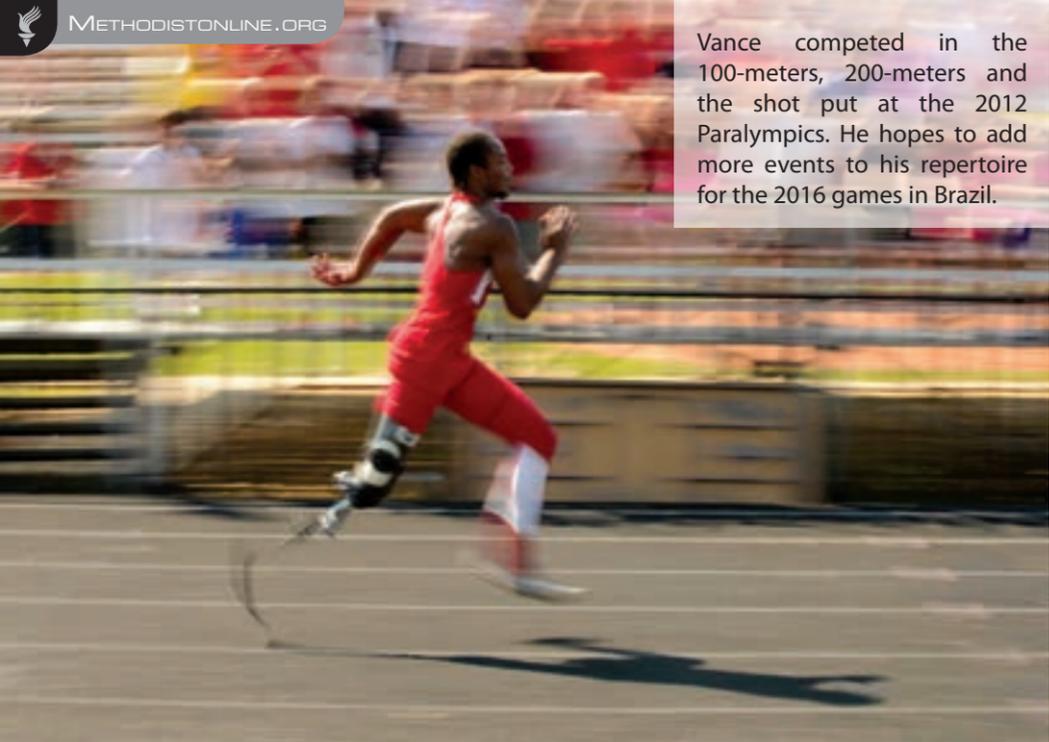
"Jennifer is like my second mom," Vance said. "I can call her at any time and I can ask her for anything."

Certified prosthetist Joe Moss

was the head mechanic. He helped design and fabricate the prosthetic socket for Vance's running leg to provide for proper fit, utmost comfort and the highest performance. He was assisted by Taylor Hankins, a resident afforded the unique opportunity to learn while working on such a high-tech device.

Meanwhile, Methodist O&P Director Chris Wallace was the crew chief, serving as administrative and clinical point man.

"Our experience with Shaquille has been beneficial on so many levels," Wallace said. "Not only has it allowed us to expand our clinical expertise by working with new advanced components, it has provided an opportunity to work with new techniques that help Shaquille per-



Vance competed in the 100-meters, 200-meters and the shot put at the 2012 Paralympics. He hopes to add more events to his repertoire for the 2016 games in Brazil.

ter to take to the Endeavor Games in June 2013.

“We see what it has meant to Shaquille to get back into competition, and we feel like there’s some other patients that it would mean a lot to as well,” Long said.

But she says their primary goal for the next four years is to make Vance faster.

“This is only the beginning,” Long said. “We’re looking at what has worked and what can work better for him as far as prosthetics to help him reach the goals he has for himself, which is ultimately gold.”

“2016, in Rio, I plan to redeem myself,” Vance said. “I’m looking to do more than just the 100, 200 and shot put. I hope to do at least five to six events. But definitely in the 100 and 200 meters, it’s going to be a showdown with the guys who beat me.”

While gold is still on his to-do list, Vance has proved that he and other Methodist Rehab athletes are a force to be reckoned with.

“It’s every athlete’s dream to come home with a medal, and that’s just what Shaquille accomplished,” said Ginny Boydston, therapeutic recreation director at Methodist Rehab. “For Methodist Rehab to have had three athletes attend the games was phenomenal, and now things are looking great for 2016. Methodist Rehab should have another shining showing, and adding another few athletes to the roster should make our chances even better.”

For more information about Methodist Orthotics & Prosthetics, call 601-936-8899.

form at the highest level as well as impact other patients we serve with similar technology.

“Our efforts with Shaquille certainly don’t define our practice completely, but they are part of our DNA now. And I expect they will be for a long time to come.”

“I can definitely say if it wasn’t for Methodist, I wouldn’t be here right now,” Vance said. “They’ve helped me in every way possible.”

Along with Vance’s great triumph came some disappointment. During the qualifier for his best event, the 100-meters, he sustained a common sports injury that hobbled his performance in the final.

“In my mind I was thinking, let’s pace ourselves and not run it all out, then at finals give it all you’ve got,” Vance said. “I got 30 or 40 meters and went to really turn it on and then my hamstring just kind of locked up.”

“You could see it in his face that he was hurt,” Long said. “It was just heartbreaking.”

But Vance exhibited his never-say-die attitude by playing through the pain and running in the final, finishing eighth.

“Honestly, when I hurt my hamstring, I just wanted to be able to finish,” he said. “I had gone 50 or 60 meters and literally wanted to stop running. But I told myself to finish the race.”

Vance says that the experience made him realize the importance of proper stretching and warm-up, and to listen more closely to the wisdom of his coaches.

Vance’s next step is the world competition in France in 2013, leading up to the next Paralympics to be held in Rio de Janeiro, Brazil, in 2016.

Meanwhile, Methodist O&P hopes to add more athletes to its ros-



Methodist Rehab and Team USA wheelchair fencer Ryan Estep, at left, competed in the epee category B pool round at the 2012 Paralympics.

Fencers focus on Rio

First trip to Paralympics has Methodist Rehab athletes Estep and Brinson looking forward

By Carey Miller

London was the first taste of the sheer magnitude of the Paralympics for Methodist Rehab wheelchair fencers Ryan Estep and Joey Brinson.

And now they’re both counting the days until the 2016 games in Rio de Janeiro, Brazil.

“It was a blast just to be there,” Brinson said. “It made me feel like all the work I had put in was worth it, just to make it there and be able to compete. And it really made me

want to get ready for the next one. I’m ready now. I wish we could go do it right now.”

“Everything about London, from start to finish, was just completely amazing,” Estep said. “I’ve never experienced anything like that, and I doubt I will again unless I go to Rio.”

Expectations had been high for the athletes going into the competition, especially for Estep, who was ranked No. 5 in the world in epee style fencing.

Unfortunately, neither competitor came home with a medal as both Estep and Brinson were eliminated in the preliminary pool rounds.

“Sure, we were disappointed in the results,” said Methodist Rehab therapeutic recreation director Ginny Boydston, who serves as team leader for the U.S. wheelchair fencing team. “But we were not disappointed in the fencers, because they made the team. They were representing the United State at the Paralymp-



pic Games. I'm very proud of our guys."

"Just getting to go there in and of itself was an accomplishment," Estep said. "I went from not even knowing what fencing was three years ago to being one of the highest ranked fencers in the world."

Making the 2012 team had been a phenomenal feat for both fencers.

"Two and a half years ago, this was just a dream," Boydston said. "We all had said that their time was 2016."

At the Paralympics, there's an intense level of pressure for the athletes to perform their absolute best on a single day of competition, after years of training and preparation.

"The pressure that we had there was so much more than any other World Cup or any other competition that we've done," Brinson said.

"Nothing I had done up to that point could have prepared me for

London—for the first time in my fencing career we had a big audience," Estep said. "I'm not making any excuses, but it was something that I wasn't used to."

Both fencers agree that the bottom line is they had an off day.

"For some unknown reason I was really passive—I was a lot more defensive and less aggressive than I normally am," Estep said. "I picked the worst day I could have to have a bad day."

"I wouldn't say that I totally fenced bad. It just wasn't good enough on that day," Brinson said. "We put in the training, we knew what we had to do, but we just didn't execute the plan completely the right way."

Estep sees London as a learning experience that will make him a tougher competitor.

"I feel that I will be much better prepared for Rio having this experience under my belt," Estep said.

Brinson agrees. "We know the real pressure of it now," he said. "I think it's prepared us to be more relaxed, to perform, to do what we've trained to do."

The future looks bright for both fencers. They have advanced so much as competitors in such a short time that all signs point to them being at the top of their respective games come 2016.

"I think more experience and more mental toughness are the two things they both need," Boydston said. "Now, we've got four years ahead of us to get that."

"We've just got to keep training and doing what we've been doing," Brinson said. "We know we can compete. We've just got to be winning."

For information on Methodist Rehab's therapeutic recreation program and its Blade Rollers wheelchair fencing team, call 601-364-3566.

Above left: Wheelchair fencer Joey Brinson, at right, fences sabre at the 2012 Paralympic games. Above center: Methodist Rehab therapeutic recreation director and Team USA Wheelchair Fencing team leader Ginny Boydston and wheelchair fencer Ryan Estep enjoy the spectacle of the opening ceremony of the Paralympic Games. Above right: Team Methodist Rehab poses for a picture in their opening ceremonies garb. From left, Ryan Estep, track and field athlete and Paralympic silver medalist Shaquille Vance, Ginny Boydston and Joey Brinson. Below right: After the Paralympics, Team USA athletes flew to Washington, D.C. for a reception at the White House. Here, Estep and Brinson are greeted by President Barack Obama.



10 YEARS OF WEST NILE IN MISSISSIPPI



DECADE OF DETECTIVE WORK PROVIDES BETTER UNDERSTANDING OF MOSQUITO-BORNE DISEASE

By Susan Christensen

Ten years later, Charlie Gibbs of Clinton still thinks: What are the odds? “One of 200,000 mosquitoes bites me,” he says. And within days, he can’t move his arms or legs.

Doctors aren’t sure what to make of Gibbs’ mysterious symptoms. They check for heart attack, stroke and even the relatively rare Guillain-Barré Syndrome.

Then a blood test reveals the true villain—a tiny mosquito bearing a terrifying virus.

“I was the first person infected with West Nile virus (WNV) in Mississippi,” Gibbs says. “Aren’t I lucky?”

Today, Gibbs has plenty of company in the WNV survivors club, particularly after a record-breaking resurgence of the virus this summer. But in July, 2002, the African import was new to the American South, having invaded the United States via New York in 1999.

When Gibbs arrived at Methodist Rehabilitation Center for therapy, he had yet to learn why he was paralyzed.

But researchers there took note of the 56-year-old’s shrunken limbs and thought: This guy looks like he has polio. The hunch led to a stunning discovery for Dr. Art Leis and Dr. Dobrivoje Stokic, scientists



The expertise of Dr. Dobrivoje Stokic, left, and Dr. Art Leis has been in the spotlight during this record-breaking year for West Nile virus cases. In 2002, the Methodist Rehab researchers were the first to link the virus to a polio-like paralysis, and their studies continue to shed new light on the disease’s disabling effects.

Betty and Jerry Byrd have definitely made good on their wedding vows to stay together through sickness and in health. The Brookhaven couple recently spent time at Methodist Rehab as they recovered from debilitating cases of West Nile virus infection. Here, they enjoy a game of dominoes with Methodist Rehab therapeutic recreation specialist Kelcey Pollard before doing more therapy to recover abilities lost after contracting the disease. "The worst part right now is my left leg," Jerry said during his 18-day stay. "It hasn't got any power at all."



for the hospital's Center for Neuroscience and Neurological Recovery (CNNR).

After doing an exhaustive series of tests on Gibbs and two other paralyzed West Nile patients, the researchers became the first in the world to report that WNV can target the motor neurons of the spinal cord, causing muscle weakness, fatigue and a polio-like paralysis. And their discovery became breaking news in the *New England Journal of Medicine*, on the Web site of the Centers for Disease Control (CDC) and in some 700 media outlets across the country.

To some, a rehab hospital in Mississippi must have seemed an unlikely place for such groundbreaking work. But the researchers say it makes perfect sense if you consider Methodist Rehab's clinical focus.

"In a rehab setting, it's common to see people with polio-like syn-

dromes," Dr. Stokic said.

"So when we see scattered, flaccid paralysis, there is one thing that comes to mind—poliomyelitis," added Dr. Leis.

As a neurologist whose specialty is electro-diagnostic testing, Dr. Leis brought another level of expertise to the mix. His sophisticated studies revealed the virus was targeting the grey matter of the spinal cord, causing symptoms eerily similar to the polio epidemic of the 50s and 60s.

The findings were later confirmed by autopsy results, yet the researchers initially had to defend the term West Nile virus poliomyelitis. Now, it's part of the CDC classification system.

Identifying the Impact

In the decade since, Methodist Rehab scientists have published 14 manuscripts about WNV, and their detective work continues as they

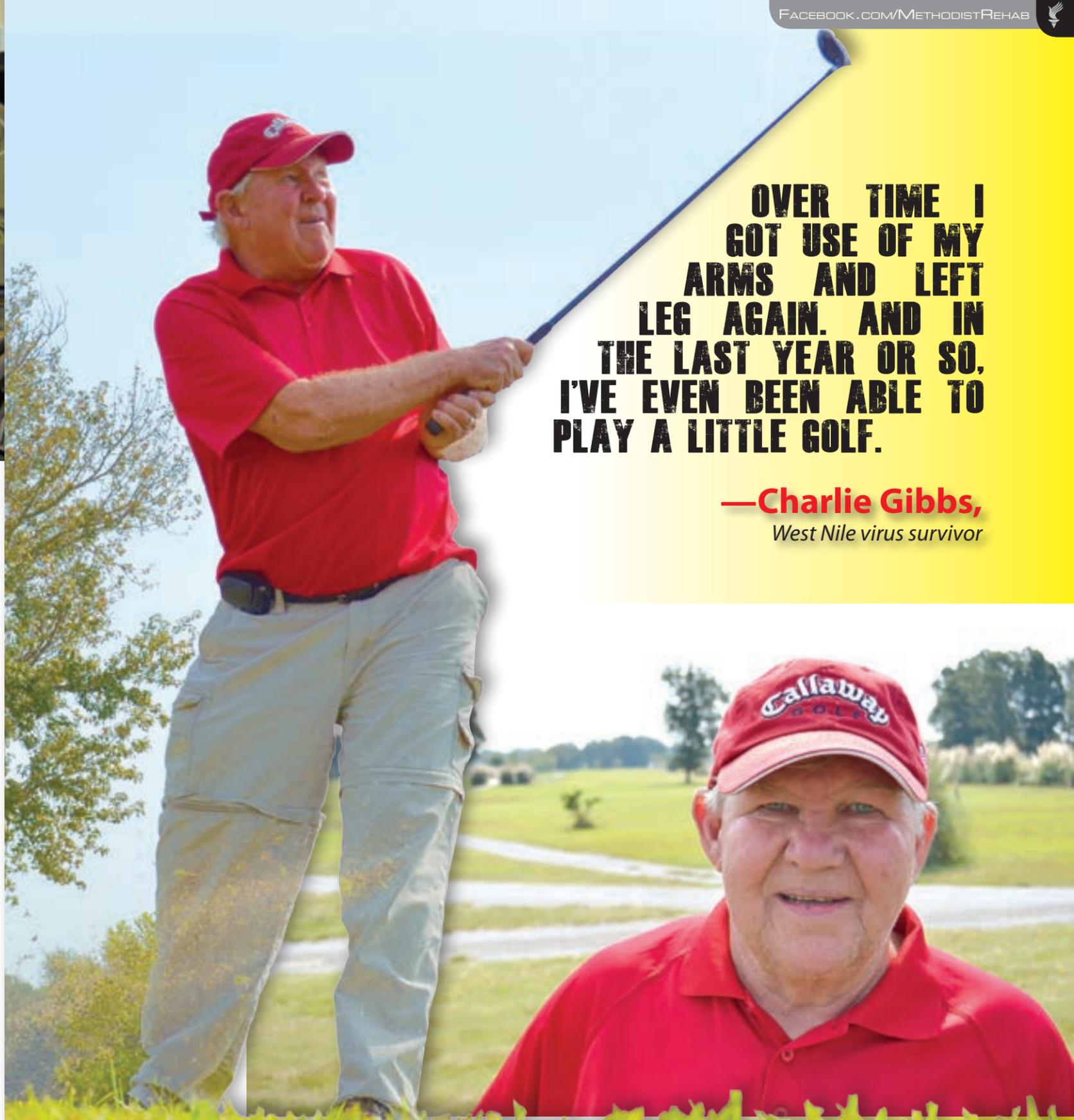
seek to learn more about a virus that has killed more than 1,400 Americans and sickened almost 36,000.

Lately, they've focused on the long-term ramifications of the infection, such as the debilitating fatigue first identified during a 2003 federally funded study done in conjunction with the Mississippi Department of Health.

Dr. Stokic, Methodist Rehab's administrative director of research, said the study found that lasting fatigue affected about half of the study participants. About one in five said it was severe enough to impact their daily lives.

In the quest to find out why, MRC researchers have recently uncovered signs of central nervous system damage even in patients with mild cases of WNV.

Working with Dr. Axel Petzold, a University College of London's Institute of Neurology expert, they



OVER TIME I GOT USE OF MY ARMS AND LEFT LEG AGAIN. AND IN THE LAST YEAR OR SO, I'VE EVEN BEEN ABLE TO PLAY A LITTLE GOLF.

—Charlie Gibbs,
West Nile virus survivor