

McLeod

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magazine



Working Wonders with
Compassion & Technology

Views



We live in an age where change is constant. Frequently, transformations are required in our families, society, the economy, and even in an industry like medicine. Change may also breed uncertainty or fear. However, at McLeod, we have a legacy of moving forward despite tough challenges surrounding us. We must remain true to our mission of improving the health and well being of the communities we serve, and continue to be vigilant in our focus on excellence in service and care.

For more than a century, McLeod Health has embraced a better future in health care through our people, innovation and advancing our skills, knowledge and technology on behalf of patients and their families. Each day, science and medicine, coupled with the expertise of those guiding the tools, further enhance communication, diagnosis and treatment for the ill and injured. Working together, lives are changed or saved, pain is eased and quality of life is extended or restored.

At McLeod Health, we celebrate these achievements, marveling at the extraordinary outcomes. We take time to reflect on the wonder of healing. We recognize the dramatic role of partnering as caregivers and professionals with patients and their loved ones in the journey to better health.

Abraham Lincoln once said, "The best thing about the future is that it comes one day at a time." Thank you for daily giving us the privilege of being part of your family. Please join us as we share the following stories of hope, tenderness of hearts and hands, and the will to make tomorrow even better.

Robert L. Colones

Rob Colones,
President, McLeod Health



Working Wonders with Compassion & Technology

On the Cover:

Amy Mohr credits McLeod for saving the life of her five-year-old son, Nicholas.

Nicholas required lifesaving treatment in October after suffering from a near-fatal seizure.



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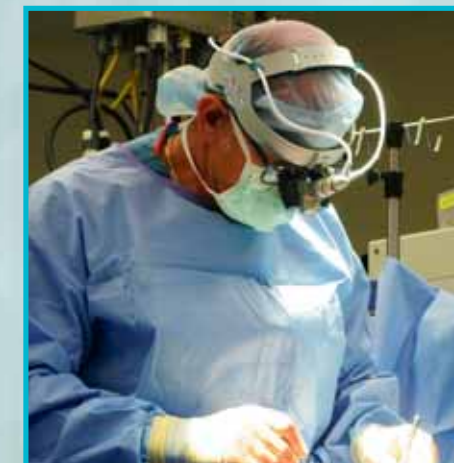


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Witnessing Miracles



Dr. Ric and Amy Mohr credit McLeod for saving the life of their five-year-old son, Nicholas, center, shown with his brother, Nolan and sister, Charley.

When he was 5, Nicholas Mohr did something his parents feared was impossible. *He came home.*

by Leah Fleming

Nicholas Mohr is the beautiful five-year-old son of Amy and **Dr. Richard Mohr**. Nicholas' big brown eyes light up when he hears the theme song to "Go, Diego, Go!," a popular children's television show. However, Nicholas is not like other children his age. "Nicholas is special," explains his older sister, Charley. "He has a baby brain."

Nicholas was born with a congenital brain disorder called Lissencephaly, which means "smooth brain" because of the lack of brain folds and grooves. As a result, Nicholas is developmentally the age of an infant. He also suffers from frequent seizures.

Amy recalls that she enjoyed a healthy pregnancy, and Nicholas was born full-term. But when he was just two months old, the Mohr's began to notice some developmental delays in their son. They questioned whether Nicholas was deaf or blind when he did not notice they had entered the room. The concerned parents tested Nicholas' hearing and vision, but no problems were found.

At four months of age, Amy was faced with the terrifying experience of Nicholas' first seizure. Amy called her husband, a family medicine physician at McLeod Family Medicine Health and Fitness, who was on-call at the time. He told her to hang up and call EMS immediately. He was on the way home and they would go to the McLeod Emergency Department together.

At the Emergency Department, physicians and staff monitored Nicholas, and determined that he was continuing to have more seizures. They began to administer medication to stop the seizures and ordered a series of brain scans, which revealed that Nicholas had Lissencephaly.

That night, while Nicholas was monitored in the McLeod Pediatric Intensive Care Unit (PICU), Amy researched Nicholas' newly diagnosed condition at his bedside. She wept as she learned that most children with Lissencephaly die within two years after birth.

The Mohr's did not give up hope for Nicholas and pursued in-home therapy. Upon returning home, they immediately enrolled him in physical, occupational, and speech therapy.

Despite anti-seizure medication, Nicholas continued to suffer from

"We see the miracle in Nicholas laughing out loud and we do not take things for granted."

— Amy Mohr

seizures. During a seizure he would hold his breath, but begin to breathe again once the seizure was over. This past October, however, Nicholas experienced a particularly long seizure and did not regain his breath once the seizure had run its course. Nicholas' therapist was at the Mohr's home, and began CPR while Amy called 911.

"Even though we were doing rescue breathing, it was not adequate," remembers Amy. "By the time the paramedics got there, Nicholas was purple."

Dr. Mohr rode with Nicholas in the ambulance, where emergency responders inserted a tracheal tube to open up Nicholas' airways. They also connected him to a ventilator to force oxygen into his lungs.

When Amy arrived at the McLeod Emergency Department, her husband advised her to stay in the waiting room. "I could tell by the look on his face that it was bad," she said. "Sitting in the waiting room, I thought I was going to die. I crumpled to the floor and cried because I just didn't have the strength to sit in a chair. I do not know who she was, but an Emergency Department staff member sat with me on the floor, put her arms around me, and just let me cry."

In the exam room, McLeod Emergency physicians and staff were monitoring Nicholas' heart rhythms and saw that his heart was in ventricular fibrillation. McLeod Emergency physician **Dr. Bryon Frost** explained that this abnormal heart rhythm is caused by an uncoordinated contraction of the cardiac muscle of the ventricles in the heart, making them quiver rather than contract properly.

"Ventricular fibrillation is a medical emergency that requires prompt advanced life support interventions," he said. "If the patient is not revived after a certain period of time, they could sustain irreversible brain damage or death."

Physicians and staff immediately began resuscitation procedures, giving Nicholas several rounds of epinephrine, or adrenaline, and defibrillating his heart, shocking it back to a normal rhythm. The efforts would work temporarily, and then his heart would return to the abnormal state. The team then tried repositioning the tracheal tube in an attempt to give his lungs more oxygen.

"I was thinking, 'Is this the day we've been dreading, where will we lose Nicholas?'" said Dr. Mohr. "After what seemed like an eternity, I finally heard someone say, 'We've got a pulse!' They had saved his life."

Dr. Frost recalls the intense situation. "I did not think Nicholas was going to survive," he said. "It was really stressful on all of us. But instead of panicking, our physicians and staff get calmer in these situations. Resuscitating patients is our 'specialty.' It is so ingrained in the way we work. Everyone did their job like they were trained to, and Nicholas' life was saved because of the expertise and experience of the McLeod Emergency Department physicians and staff."

Nicholas was transferred to the McLeod PICU to be monitored during his recovery. **Dr. Judith Ugale-Wilson**, a McLeod Pediatric Intensivist, explained that Nicholas required support from the ventilator to assist with his breathing.



McLeod Pediatric Intensivist Dr. Judith Ugale-Wilson and McLeod Emergency Physician Dr. Bryon Frost were involved in Nicholas' care.

He was also given medication to control any additional seizures he may have as well as a sedative to make him more comfortable while he was on the ventilator.

It was unclear what Nicholas would be like once he was taken off of the ventilator and awake. "One of Nicholas' favorite things in the world is "Go, Diego, Go!," explained Dr. Mohr. "When he hears the theme song, he starts kicking and laughing. After he woke up, I told the PICU staff that the easiest way to tell if he's okay is to turn Diego on. When he heard that song, he started squealing and kicking his legs, and I immediately said, 'Nicholas is just fine.'"

"Kids are very different than adults," explained Dr. Ugale-Wilson. "Some adults would not have recovered after being without oxygen for that period of time."

After two nights in the PICU, Nicholas was well enough to be transferred to a patient room on the general Children's Hospital floor. His parents were delighted when the PICU staff gave Nicholas a standing ovation as he was wheeled out to the floor.

"It was really touching," said Amy. "We have been using the McLeod Children's Hospital since Nicholas was three months-old, and they have been taking care of him for the last four-and-a-half years. I have had nurses come up to us and say they were honored and privileged to take care of Nicholas."

"As a McLeod physician, I have interacted with the staff in the care of patients, and I can tell you, that is the way they treat all of their patients," said Dr. Mohr. "They have a calling. Most of the nurses and staff have been in the McLeod Children's Hospital for a very

long time, and I believe it is because they love what they do, and I appreciate it."

The Mohr's note that since Nicholas' last hospitalization, he has been a more energetic and playful child. "It had been months since he laughed or rolled over, and he was very lethargic," said Dr. Mohr. "We do not know if this last spell 'woke him up,' or if it was the medication adjustment, but he has been laughing a lot. He is also on a pulse-oxygen monitor in the evenings, and the beeping noises will make him giggle. Our daughter has found that if she replicates the 'beep-beep,' he will giggle on command. It is a really good feeling. He is rolling over more and he has greater head control." Nicholas also continues to receive therapy at home once a week.

"He is just fantastic," exclaims Amy. "Despite the things Nicholas cannot do, he still smiles every morning when I wake him up. It is the sweetest feeling."

"When you are pregnant, you take for granted that your child is going to be healthy. But when you become the parent of a special needs child, you get to be a witness to miracles. We see the miracle in Nicholas laughing out loud and we do not take things for granted. You move from a place where you are grief stricken to where you are absolutely honored to be their parent."

"If I have had a rough day, all it takes is for me to look at Nicholas and see him smile, and I realize I do not have a thing in the world to complain about," adds Dr. Mohr. "If he can be happy with his disabilities, then I'm good."

"As a physician, he has given me insight into caring for other special needs children. I can better relate to the parents' feelings and some of the issues they have. As a parent, Nicholas has taught me to have compassion."

"Ric and I credit McLeod for saving our son's life. We are so incredibly grateful and fortunate to have a Children's Hospital so close to us that takes such good care of our children."

BLESSED WITH *Two Miracles*

Born 4 months premature, Sullivan and Hallie accomplished something remarkable. *Going home.*

by Jessica Wall



Landon and Leah Reynolds feel blessed to have their two miracles, Hallie (left) and Sullivan (right), who were born at just 23 weeks and 6 days.

Expectant parents joyfully anticipate the arrival of their baby for nine long months. Leah and Landon Reynolds, who were welcoming two bundles of joy, were no different. They just did not expect to meet their twin daughters so soon.

Landon and Leah describe Easter 2012 as the “calm before the storm.” Nearly four months earlier, they were overjoyed to learn that they were expecting twins. In tune to her first pregnancy and how her body was changing, Leah went to see her physician in March because she felt that “something wasn’t right.” After six days of bed rest Leah returned to the doctor only to learn that she was three centimeters dilated, indicating signs of impending labor.

She was immediately sent to McLeod, where for six more days, the medical team made every effort to prolong her delivery.

“Landon and Leah had great faith all along, and Hallie and Sullivan continued to surprise everyone. Each child is unique, but for both girls to be doing well is simply uncommon.”

– Dr. Joseph Harlan

Despite all efforts, on April 9, 2012, the day after Easter, Leah went into labor at just 23 weeks and six days.

At 6:24 a.m., in a hushed, yet critical moment, Landon and Leah welcomed their first child, Sullivan Grace, into the world. Sullivan weighed one pound, three ounces and measured ten and a half inches long. Thirteen minutes later, at 6:37 a.m., Hallie Elizabeth made her arrival, weighing one pound, five ounces and measuring eleven and three-quarters inches long.

“From that moment on, our lives were completely changed,” recalls Leah.

“We were told initially that the next few months would be a roller-coaster ride, and we experienced every bit of it,” says Landon. “There were good days – where we did not fear for their lives – and then there were some really dark days.”

Dr. Joseph Harlan, a McLeod Neonatologist, was one of the physicians who treated Sullivan and Hallie in the Neonatal Intensive Care Unit (NICU).

“Many extremely premature babies, those born between 22 and 25 weeks, do not survive,” says Dr. Harlan. “For the babies who do survive, their lungs have not formed normally, so they can

be sick longer, less responsive to treatment and more likely to suffer lung injury.

“Hallie and Sullivan, however, did relatively well for 23 weeks gestation, although they experienced all the complications possible,” adds Dr. Harlan.

Within thirty hours of birth, Hallie developed Pulmonary Interstitial Emphysema (PIE), a condition where tears in the lung cause air to leak out of the air sacs into the chest. PIE can grow worse despite any course of treatment.

“If a large tear occurs, the lung can collapse. On the other hand, it is more common to have many small tears, which can really complicate lung recovery,” says Dr. Harlan.

Hallie was first placed on a high-frequency ventilator, but her condition did not improve. She was then moved to a jet ventilator, which puffed air into her lungs approximately 400 times per minute. Immediately, Hallie’s lung condition improved.

“I will never forget Dr. Harlan waiting to show me Hallie’s chest X-ray. There was a complete and very apparent difference in her lungs in just 24 hours,” recalls Landon.

Shortly after, echocardiograms revealed that both Hallie and Sullivan had Patent Ductus Arteriosus (PDA). PDA is a congenital heart defect common in premature infants where the blood vessel that connects the heart’s two major arteries does not close after birth and allows blood to flow into the lungs. This adds stress to the heart and if left untreated, can lead to congestive heart failure.

Both Hallie and Sullivan required two courses of Indocin, a medicine used to treat this condition. Sullivan’s PDA closed; however, Hallie continued to struggle. Consequently, Hallie underwent a surgical procedure known as a PDA ligation to close the blood vessel.

Another major battle Hallie and Sullivan had to face was Intraventricular Hemorrhage (IVH), also known as a brain bleed.

Dr. Harlan explains, “The treatment of premature babies can be very unpredictable.

“Hallie and Sullivan were more vulnerable to brain hemorrhage because their blood vessels were more fragile and they could not regulate their blood pressure very well.”

Brain hemorrhages are divided into four categories, or grades. Sullivan developed a Grade 1 IVH on the right side of her brain, which means that the bleeding was constrained to the blood vessel and would not cause further harm. Her brain bleed resolved without treatment.

Hallie developed a Grade 2 IVH, also on her right side, indicating bleeding into the supporting areas of the brain. This caused increased concern for the team as the day of her PDA surgery was approaching.

A few days before Hallie’s surgery, Dr. Harlan ordered a cranial ultrasound. Amazingly, it showed no sign of an IVH.

“This is a very rare occurrence because the IVH normally regresses and slowly goes away, but it was completely gone,” explains Landon.

Six weeks after the birth of their twins, the day finally came that Landon

and Leah could hold their precious babies.

“It was Mother’s Day, and I held Sullivan first,” recalls Leah. “She was so small that all I could feel were the blankets, and I could only hold her for a few minutes because she had to remain in her isolette to regulate her body temperature. Then, a few days later, I held Hallie.”

After four months in the McLeod NICU, Landon and Leah took Hallie and Sullivan home.

“One of the hardest experiences for us after Leah’s discharge from the hospital was turning into our driveway without our children,” says Landon. “However, bringing our girls home four months later was overwhelmingly joyful.”

“Landon and Leah had great faith all along, and Hallie and Sullivan continued to surprise everyone,” Dr. Harlan recalls. “Each child is unique, but for both girls to be doing well is simply uncommon.”

The chances of both twins surviving birth at 23 weeks gestation is only 12%, which correlates to a 6% survival rate

for each twin, according to the National Institute of Child Health and Human Development. For both Hallie and Sullivan to survive, they beat the odds by far.

Recently, Hallie and Sullivan celebrated their first birthday, a milestone that perhaps seemed impossible a year ago.

Today, the girls are followed by specialists and undergoing physical therapy to monitor their development. “It’s the little things such as watching the girls hold up their heads that Landon and I rejoice over,” says Leah.

“We have been careful not to take the girls out too much, but with flu season over and summer approaching, we are hoping to take our first family vacation soon.”

As Landon so aptly puts it, “As humans, we take so much for granted, but this situation has given us an entirely different perspective. Some people do not believe in miracles, but when Leah and I look at Sullivan and Hallie, we have no doubt that we have been blessed with two.”

“Some people do not believe in miracles, but when Leah and I look at Sullivan and Hallie, we have no doubt that we have been blessed with two.”

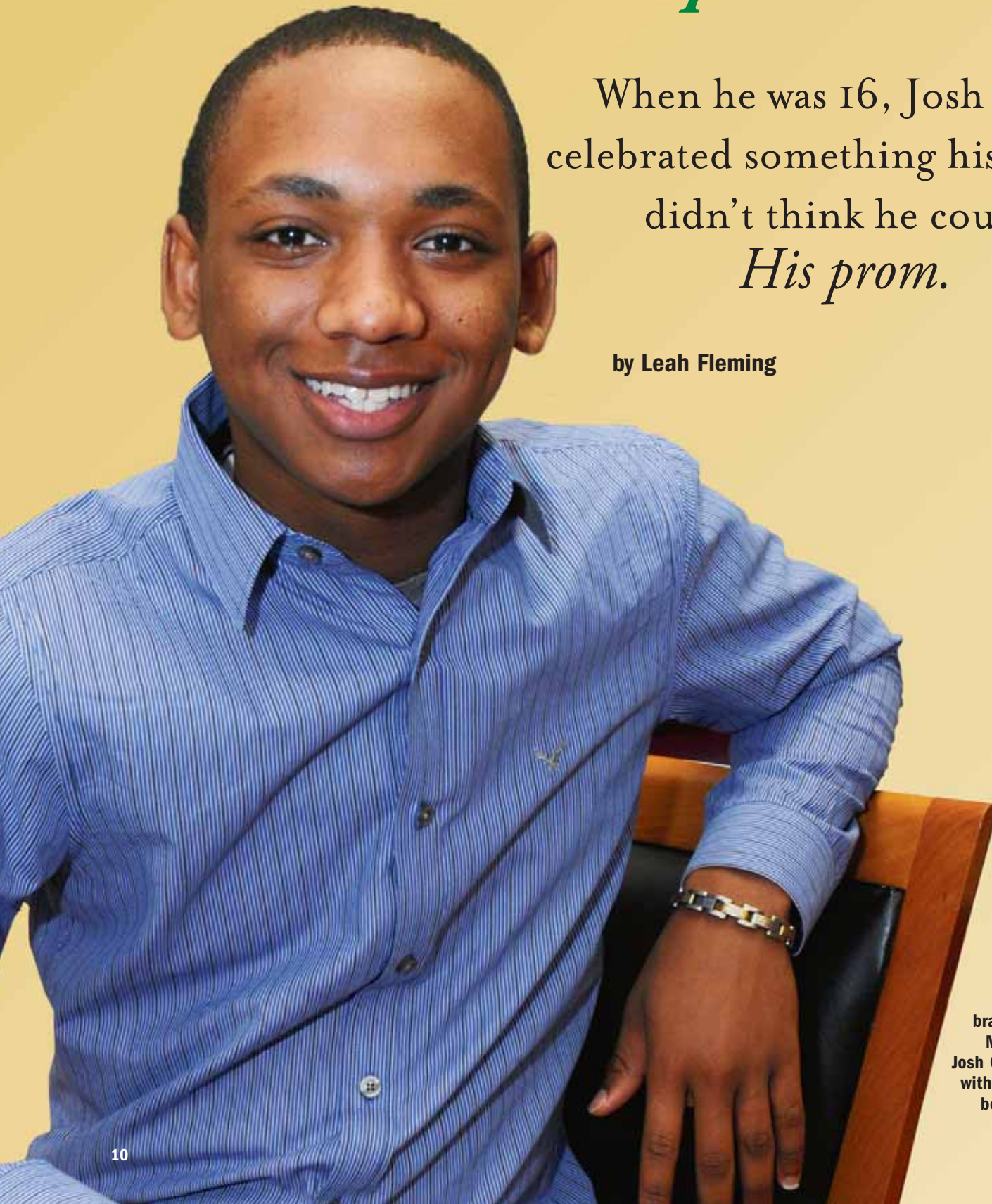
– Landon Reynolds



Living Proof *of Exceptional Care*

When he was 16, Josh Cook
celebrated something his parents
didn't think he could.
His prom.

by Leah Fleming



After having a large
brain tumor removed in
March of 2012, today
Josh Cook attends college
with the hope of one day
becoming a physician.



Dr. Andrew Rhea of Florence Neurosurgery and Spine, at right, said Josh's surgery required a microscopic surgical approach to identify and preserve the structures of the brain involved.

Josh Cook of Florence was a high school senior hoping to graduate with honors and attend college the following year. But when the energetic 16-year-old Black Belt Tae Kwon Do junior instructor began to come home and go straight to bed after school, his family knew something was wrong. Josh began to get very sick, vomiting anything that he would eat, and he was losing weight quickly.

The family sought help from their primary care physician, **Dr. Michael Brown** of Dillon Family Medicine.

"Josh came to me complaining of weight loss and abdominal pain," said Dr. Brown. "We ran a number of tests, but we could not find any reason for his symptoms. We referred him to specialists across the state, who also ran tests for weight loss and malnutrition, but they too were unable to make a diagnosis."

Josh continued to lose up to 35 pounds of weight during the course of a year. On the morning of Friday, March 16, 2012, Josh complained to his mom Barbara of a severe headache, back and

leg pain. Barbara, a nurse, was concerned about her son's new symptoms and insisted on staying home from work. She took him back to Dr. Brown.

Dr. Brown was also alarmed by these new symptoms and ordered a CT scan. The scan revealed that Josh had a brain tumor, known as a hemangioblastoma, located at the base of his brain. The tumor was large, measuring 4.6 centimeters by 3.6 centimeters and was compressing parts of Josh's brain, causing him to feel sick.

Dr. Brown knew the tumor needed to be removed right away. "If the tumor had gotten any larger, it would have put

so much pressure on the brain that it would have herniated into the spinal cord, which is fatal," he explained.

He sent the Cooks immediately to Florence Neurosurgery and Spine where **Dr. Andrew Rhea** was waiting for them. He told the Cooks that Josh's tumor needed to be removed quickly, but that he needed time to plan and prepare for the surgery and call on Neurosurgeon **Dr. William Naso** to assist.

Dr. Rhea explained that the operation would require the full attention of two surgeons, because the tumor was extremely vascular, as it was located in a part of the brain where there is a large blood supply.

“The operation required a microscopic surgical approach to identify and preserve the structures of the brain involved,” said Dr. Rhea.

Josh was admitted to the McLeod Children’s Hospital that same day. On Monday, Dr. Rhea and Dr. Naso performed the four hour surgery to remove Josh’s tumor. Dr. Rhea explained that the surgery, called a post fossa craniotomy, required a six-inch incision at the back of Josh’s head. The neurosurgeons were able to access the tumor through the opening between the two hemispheres of the cerebellum, or the lower back of the brain. The tumor was located deep in an area near the brain stem. After removing the tumor, the surgeons guided the cerebellum back together, and closed the incision. The surgeons informed Josh’s parents that they were able to completely remove the entire tumor.

Following the surgery, Josh was transported to the McLeod Pediatric Intensive Care Unit (PICU) in the McLeod Children’s Hospital. As a result of the surgery, he required a tube to drain the spinal fluid, as well as a feeding tube during his recovery. He spent three weeks in the PICU, where Dr. Rhea continued to monitor his progress.

While Dr. Rhea said this type of tumor and surgery is not that uncommon, it is rare for it to occur in a pediatric patient. However, Dr. Rhea explained that children tend to recover better than adults from the removal of this type of tumor.

“The nurses in the McLeod Children’s Hospital went out of their way to take care of me and make me feel better. There was one nurse, also named Josh, who became like a big brother to me.”

– Josh Cook



Dr. Michael Brown of Dillon Family Medicine points to the tumor in Josh’s brain that was revealed upon ordering a CT scan.

“The area of the brain where Josh’s tumor was located has a number of cranial nerves that control important functions such as balance, speech, swallowing, and vision,” said Dr. Rhea. As a result, Josh needed additional therapy to regain some of these skills.

“I never thought this could actually happen to me,” said Josh, “but the nurses in the McLeod Children’s Hospital went out of their way to take care of me and make me feel better. There was one nurse, also named Josh, who became like a big brother to me.”

When the PICU staff learned that Josh would miss his Senior Prom, they secretly arranged for a prom night in the

hospital. They made Josh a bow-tie to cover his tracheal tube, and invited his girlfriend, who arrived in her prom dress. They played music and even had a Prom King and Queen award for the couple.

“The nurses were phenomenal,” said Barbara, “and the care was excellent. It was like they were taking care of their own child.”

After three weeks in the PICU, one week on the general pediatric floor, and more time spent in rehabilitation, Josh was able to graduate with his class from high school with honors. He is currently a pre-medical student at Southern Wesleyan University in Central, South Carolina.

Josh continues to be monitored by Dr. Rhea and Dr. Brown to insure that the tumor does not return. “I really appreciate the excellent care Josh received from the team at McLeod,” adds Dr. Brown. “He is truly a miracle and they saved his life.”

“They do exceptional work,” said Josh’s dad, Michael, “and my son is living proof.”

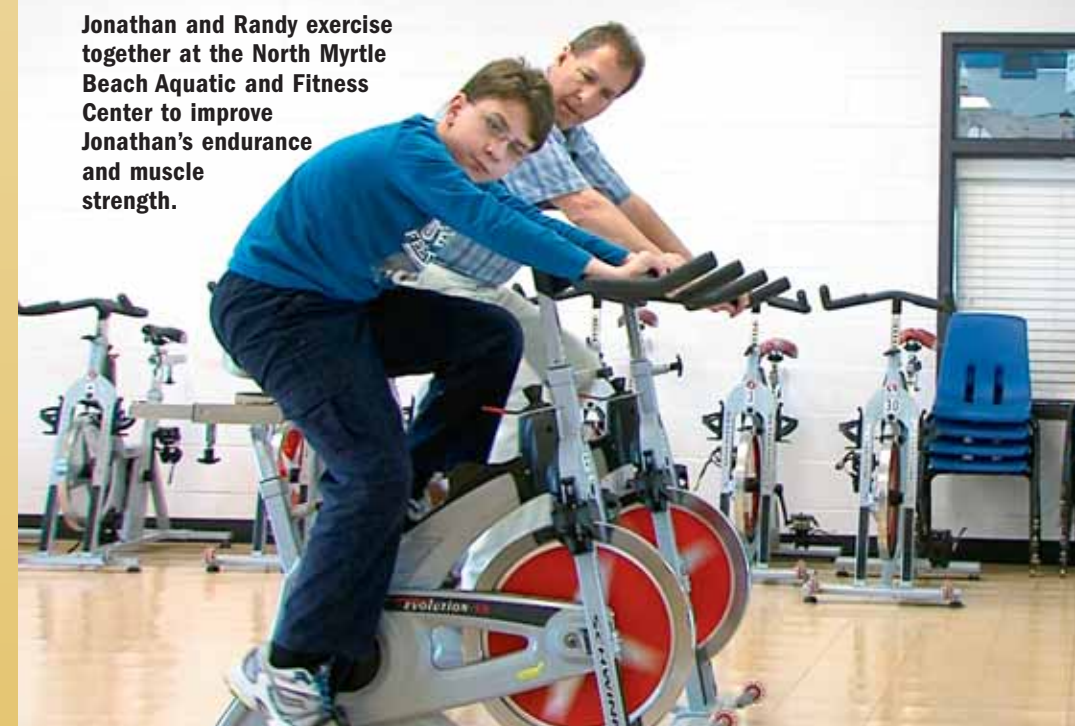
Our Family Choice: McLeod Loris Seacoast

by Jenna Falls Cox

After years of silence, Jonathan and Chandler did something their parents never thought they could. *They spoke.*



Chandler and therapist Ashley Smithson work on life skills and memory containment by practicing shoe tying.



Jonathan and Randy exercise together at the North Myrtle Beach Aquatic and Fitness Center to improve Jonathan’s endurance and muscle strength.

When a child has challenges that affect their speech or physical ability, parents will search high and low for a program that will address their child’s needs. They will also look for trusting caregivers who will love their child as much as they do.

Randy and Valeria Adams didn’t have to go far to find the team on whom they could depend. Having been a part of the McLeod Loris Seacoast family for many years, the Adams chose McLeod Seacoast Pediatric Rehabilitation to care for Jonathan and Chandler, who are both on the autism spectrum.

Autism spectrum disorder (ASD) and autism are both general terms for a group of complex disorders of brain development. These disorders are characterized, in varying degrees, by difficulties in social interaction, verbal and nonverbal communication and

repetitive behaviors, according to Autism Speaks, Inc.

“We have a long history with McLeod Loris Seacoast,” said Randy. “My mother volunteered at McLeod Loris for many years, and through that relationship, our family developed a sense of security and trust in the organization. McLeod Loris Seacoast was also our first choice when we had to decide where to deliver our babies, and now we continue that special relationship with McLeod through the pediatric rehabilitation services they offer.”

Before coming to the pediatric rehabilitation program at McLeod Seacoast, the young brothers were unable to communicate verbally.

“To see our sons advance from signing, to using pictures, to being able to speak to us, has been a truly joyous experience,” said Valeria. “Both boys look forward to their sessions, and every member of the rehabilitation team goes out of their way to challenge and help them – because they genuinely care.”

Ten-year-old Jonathan was identified as being developmentally delayed at six months-old. This began a life-long journey of doctor’s visits, therapy sessions and specialized care. Jonathan receives speech, occupational,



Jonathan and Chandler Adams have grown in their abilities to communicate thanks to McLeod Seacoast Pediatric Rehabilitation.

and physical therapy through McLeod Seacoast Pediatric Rehabilitation.

During his occupational therapy sessions, Jonathan loves to work with mazes and puzzles. He also puts into practice those skills that will benefit him throughout his life, such as learning day to day functions of getting dressed, tying his shoes, and becoming more self-sufficient.

“Our goal is to have our children become more independent,” said Valeria. “The McLeod therapists, along with our home therapists and team at school, are all players in making Jonathan and Chandler more independent children, which will hopefully direct them to leading self-sufficient lives in the future.”

Jonathan also enjoys his physical therapy sessions at the North Myrtle Beach Aquatic & Fitness Center. He learns how to shoot basketball and practices passing drills, which helps build coordination. He also rides on the stationary bike to improve his endurance and strength.

“Jonathan has grown much stronger and his gross motor skills have tremendously improved from physical therapy,” said Randy. “He has learned how to swim and has greater balance and strength from these sessions.”

Water therapy is also a positive tool that can be used for patients on the autism spectrum because it creates a barrier between the patient and their sensory triggers. For many, the

experience under water allows them to be able to focus on their goals, while limiting distractions. The water therapy relieves anxiety and other stressors that can cause the patient to engage in repetitive behavior, by creating a calming environment.

“Faced with some physical challenges, Jonathan benefits a great deal from having access to physical therapy,” states Valeria.

Chandler, age 8, enjoys visiting Pediatric Rehabilitation simply because it allows him to have fun. He participates in several sensory activities. These include swinging, working with the therapy ball, and jumping on the trampoline during the course of an occupational therapy session. Chandler also works on handwriting skills and grasping a pencil, supporting success in school.

“A huge benefit that our boys gain during therapy sessions is confidence. The skills my sons learn during therapy and the praise they receive from their therapists, give them the assurance they need to feel good about themselves,” said Randy.

“The appointments themselves also add structure to their lives and help them maintain a regular routine. Both boys thrive in this type of organized environment, which is why each therapy session is started by making a ‘To Do List’ so they know what to expect next and stay on task.”

Chandler and Jonathan also benefit from speech therapy once a week. While they have their own individual goals, both boys work on improving reading and auditory comprehension, and verbally formulating grammatically correct sentences during speech sessions.

“Everyone at McLeod Loris Seacoast goes out of their way to try to help our sons,” said Valeria. “The doctors and staff care about them. Based on all that they have achieved, we are proof that McLeod Loris Seacoast benefits our children.”

Jonathan and Chandler were both delivered at McLeod Loris by **Dr. Chris McCauley**, of McLeod OB/GYN Seacoast. “Dr. McCauley is an excellent resource for new parents,” Valeria said. “There is not a manual for new parents and Dr. McCauley and the staff were very knowledgeable and always made us feel very comfortable.”

Jonathan and Chandler have also been under the care of **Dr. Keith Harkins**, of Southern Medical Associates. “Dr. Harkins is our lifeline,” said Valeria. “He and the staff go above and beyond at every appointment to give us the most up to date information and support we need.”

“We are very thankful to be a part of the McLeod Loris Seacoast family,” said Randy. “Quality service and dedicated staff are why we chose McLeod to care for our sons.”

McLeod Seacoast

PEDIATRIC REHABILITATION SERVICES

The McLeod Seacoast Rehabilitation Therapists are specialized in the diagnosis, treatment, and management of infants, children and adolescents with a variety of congenital, development, neuromuscular, skeletal, and/or acquired disorders/diseases.

Rehabilitation involves a wide variety of methods to treat pediatric disorders by improving motor skills, balance and coordination.

The Pediatric Program includes assessment and/or treatment of:

- Sensory integration
- Autism
- Developmental delay
- Muscular dystrophy
- Spina bifida
- Mental retardation
- Cerebral palsy
- Juvenile rheumatoid arthritis
- Delayed motor development
- Impaired motor development
- Speech/language delay
- Voice disorders
- Stuttering
- Reading disorders

For more information about McLeod Seacoast Pediatric Services, please call (843) 390-8254.

“The McLeod therapists, along with our home therapists and team at school, are all players in making Jonathan and Chandler more independent children, which will hopefully direct them to leading self-sufficient lives in the future.”

– Valeria Adams

ADVANCEMENTS IN TECHNOLOGY

Improving Patient Outcomes and Experiences

by Jessica Wall

New healthcare technologies offered at McLeod Health are continually being reviewed and enhanced to provide patients with state-of-the-art tools for earlier detection and safer care.

For more than a century, the leaders of McLeod have held to the principles of prudence and stewardship, paving the way for the hospital to continually meet the highest standards of care, quality and safety for patients. Moreover, this commitment to excellence requires a dedication to keep pace with advancements in medicine and improve the equipment, technology and facilities of McLeod Health.

Recently, McLeod Regional Medical Center, McLeod Dillon and McLeod

Seacoast each installed new pieces of advanced technology that significantly impact patient outcomes and experiences.

McLeod Regional Medical Center

Earlier this year, McLeod Radiology Services installed a 320-slice CT scanner and enhanced imaging technology known as ClearRead Bone Suppression. These technologies not only improve the safety of diagnostic testing, but also allow for earlier detection of diseases

such as lung cancer and pneumonia.

McLeod is the **first hospital** in South Carolina to install both of these pieces of technology.

320-Slice CT Scanner

The Toshiba Aquilion ONE offers patients access to unprecedented technology that provides faster, more precise results and shorter procedure times, thereby reducing the amount of radiation exposure patients receive.

“With the 320-slice CT scanner, we have the opportunity to scan more of the patient’s body in less time,” says **Dr. Sam Hill** with Florence Radiological Associates. “Another benefit is that the scanner is capable of producing clear images even when the patient cannot remain completely still.”

This new CT scanner is one of the most advanced medical imaging devices available. It is also the world’s first CT system capable of showing organ function in real time and the only system capable of imaging bone and soft tissue in motion.

With 320-rows of detectors, instead of the typical 16 or 64 rows of detectors, the Aquilion ONE enables radiologists and physicians to view a patient’s heart as it is beating, which often results in a more accurate diagnosis.

Not only is the 320-slice CT scanner more accurate, it also produces rapid results. The scanner is fast enough to image the entire heart in less than a heartbeat and can reduce radiation exposure by as much as 80 percent.

Imaging Software

Sophisticated new software at McLeod is improving the early detection of diseases such as lung cancer and pneumonia.

“ClearRead Bone Suppression is the most significant advancement in chest radiography since digital imaging became available,” said **Dr. Gregor Cleveland** with Florence Radiological Associates.

Using the world’s most common imaging exam, the chest X-ray, this technology enhances the clarity of digital images by removing bone, giving radiologists and physicians a better opportunity to spot underlying diseases that might go unnoticed on a traditional chest X-ray.

Recent national studies indicate that this software helps radiologists detect approximately one out of six previously

This commitment to excellence requires a dedication to keep pace with advancements in medicine and improve the equipment, technology and facilities of McLeod Health.

missed masses. As a result, patients receive diagnoses at earlier stages where more treatment options are available and survival rates are higher.

McLeod Physicians diagnose more than 1,200 new cases of cancer in the region each year, and of these cases, lung cancer continues to remain one of the top diagnosed sites.

With McLeod Radiology Services performing approximately 250 chest X-rays per day, there is considerable opportunity to detect diseases sooner.

This technological advancement requires no additional radiation exposure or patient procedures. Patients simply undergo a routine chest X-ray, and McLeod Radiologists and Physicians apply the software to the digital images they read. Furthermore, there is no additional cost to the patient because of generous donations made to the McLeod Health Foundation.

McLeod Dillon

In an effort to improve the patient-friendly environment of its Emergency Department (ED), McLeod Dillon has recently completed a renovation project that includes the addition of a 32-slice CT scanner.

“As ED utilization has grown to nearly 28,000 visits each year, the need

for immediate results is evident. This 32-slice CT scanner delivers quick results and can save minutes during those emergent situations, leading to faster diagnosis and treatment as well as better patient flow for the ED in general,” said Tim McKinley, Director of Radiology at McLeod Dillon.

The Toshiba Aquilion RXL uses the most advanced technology in its class to lower radiation exposure while improving image quality, offering patients of the McLeod Dillon Emergency Department access to safer, more accurate imaging services.

Low-Dose Radiation Program

McLeod Regional Medical Center (MRMC) and McLeod Dillon are leading the effort to make CT imaging as safe as possible for both adult and pediatric patients with their participation in the Toshiba PROTECT Program.

McLeod Radiologist Dr. Sam Hill announces the revolutionary 320-slice CT scanner which captures high quality images of the patient’s body while significantly reducing radiation exposure.



“At McLeod, we are driven to improve patient care by lowering radiation dose while also maintaining high image quality, and the combination of the 320-slice CT scanner and the PROTECT program will help us achieve this mission,” said David Poston, Director of Radiology and Imaging for MRM. “These technologies change the way we treat patients. For example, we are now imaging all cardiac patients with the 320-slice CT scanner, due to its ability to capture the heart in one rotation and show dynamic function, all at a low level of radiation.”

Already, radiation exposure has been reduced by 50 percent on cardiac scans with the 320-slice CT scanner, and with time, that percentage will increase, according to Poston.

Over the next three years, the Radiology staff of MRM and McLeod Dillon will work closely with the Toshiba PROTECT Team to continually improve the low-dose radiation program in an effort to provide patients with safer imaging options.

These medical centers are the first in South Carolina to implement the

Dr. Gregor Cleveland, a McLeod Radiologist, demonstrates the imaging software that will help radiologists and physicians detect lung cancer and other diseases much earlier.

PROTECT program with the recent installation of the 320-slice and 32-slice CT systems.

McLeod Seacoast

Earlier this year, McLeod Seacoast installed a revolutionary MRI system designed with patients in mind.

This MRI offers patients more space for utmost comfort, including a cushion designed to alleviate pressure points. The comfortable, flexible cushion coils adjust to the contours of the patient’s body while producing high resolution images of the entire body.

“We are excited to be performing patient scans with our new MRI, which is the latest and greatest that GE has to offer. Patients of all sizes are better accommodated, and those plagued with claustrophobia are more at ease in the spacious unit,” said Reginald Cooks, Director of Radiology for McLeod Loris Seacoast. “With this advanced MRI, we can also now perform procedures at McLeod Seacoast, such as imaging of the abdomen and blood vessels, which were previously available only at McLeod Loris.”

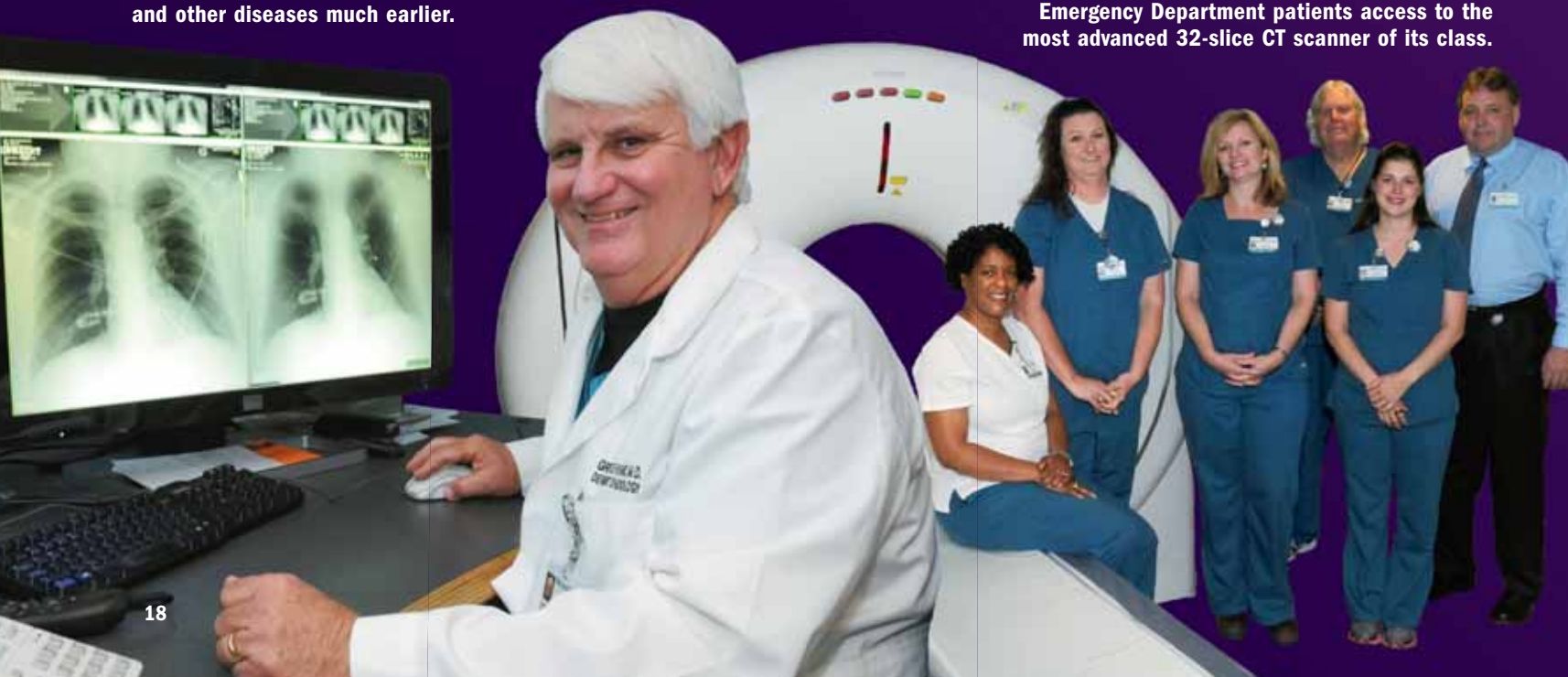


MRI Technologist Judy Beckwith prepares a patient for their scan in the new, spacious MRI at McLeod Seacoast.

McLeod Seacoast is the first and only facility in the Coastal Carolinas to have access to this patient-friendly MRI system, which was made possible by a grant from the McLeod Loris Seacoast Healthcare Foundation.

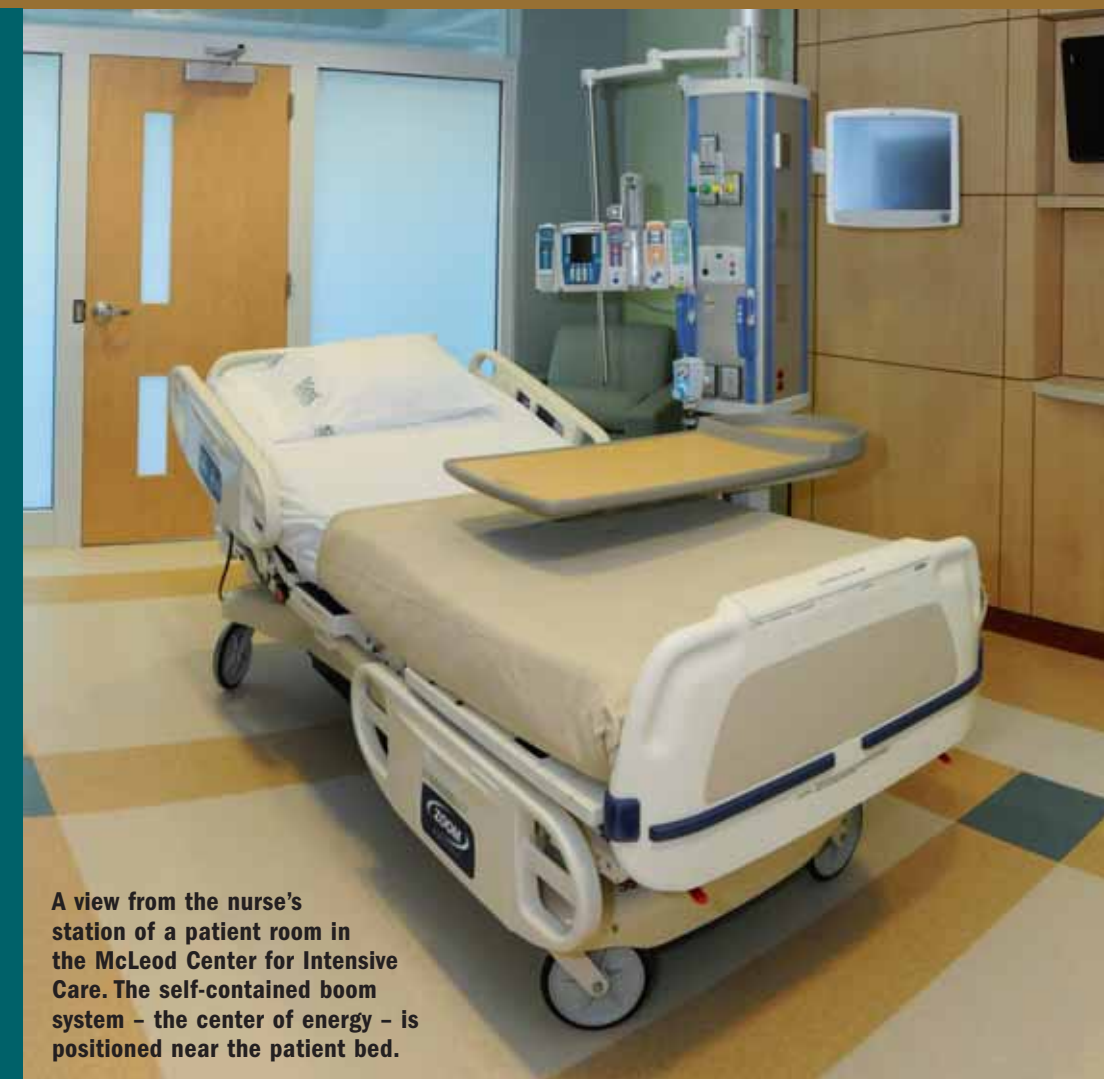
In a never ending mission to find better and safer ways to serve its patients, McLeod Health will continue to seek out the latest technology to detect diseases earlier, increase survival for such conditions as lung cancer and protect patients from overexposure to radiation.

(L to R) Kimberly Benson, Shannon Stutler, Tammy Kelly, Steve Willis, Nealy Taylor and Tim McKinley, Director of Radiology for McLeod Dillon, are pleased to offer McLeod Dillon Emergency Department patients access to the most advanced 32-slice CT scanner of its class.



Comfort & Compassion IN CRITICAL CARE

A constant beep comes from an overhead monitor displaying the patient’s heart activity. The blood pressure cuff expands and releases pressure on the patient’s arm. A nurse enters the room and checks the patient’s vitals and the ventilator that is helping the patient breathe. She administers medication and props the patient up with extra pillows for comfort. While doing so, she greets the family member seated in a chair next to the bed. The tearful young woman is updated on her grandmother’s condition. The nurse gently asks if she would like to learn how to massage her grandmother’s legs to help prevent blood clots.



A view from the nurse’s station of a patient room in the McLeod Center for Intensive Care. The self-contained boom system – the center of energy – is positioned near the patient bed.

by Kristie Salvato Gibbs

Acutely ill, the grandmother is unable to communicate or care for her own basic needs. Her granddaughter appears frightened and unsure. “Will Granny overcome this serious condition?” she asks herself.

Critically ill and injured patients require a level of care that extends beyond treatment found in other areas of a hospital. They need constant, close monitoring and support from a dedicated

team of medical experts who provide lifesaving care at the highest level. Specialized equipment and advanced monitoring systems are also essential in helping to return these patients to normal function.

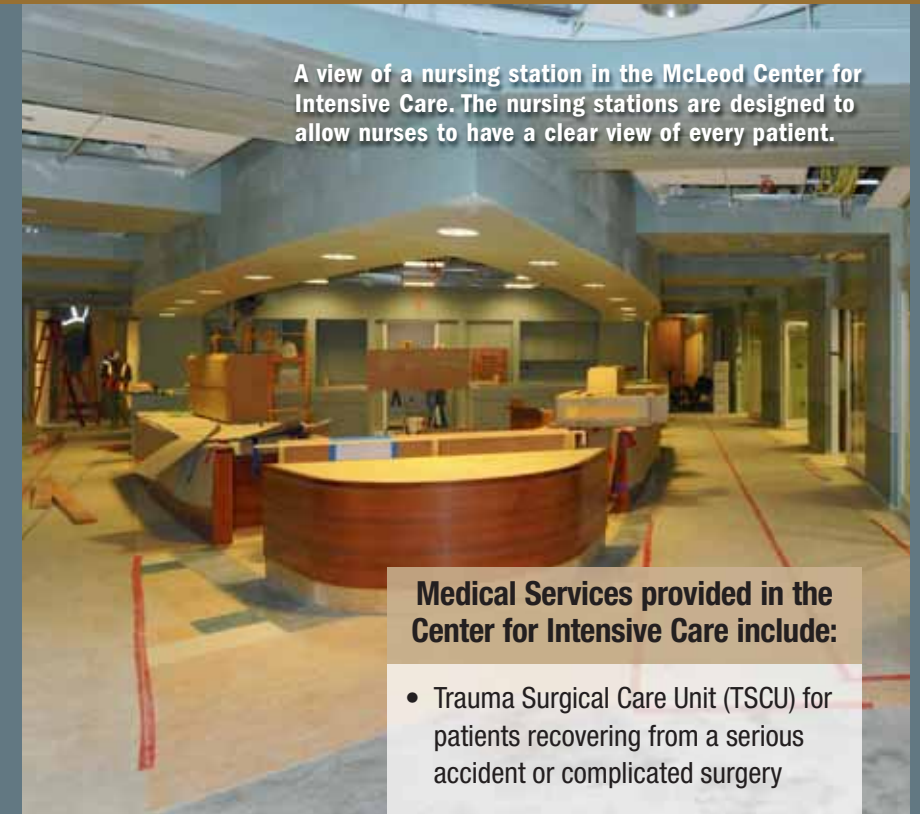
“There have been many changes in healthcare over the last few decades,” said Marie Segars, Senior Vice President and Administrator of McLeod Regional Medical Center.



The McLeod Tower is reflected on the side of the McLeod Center for Intensive Care.



Hallways are located on the outside of patient rooms providing family members direct and private access to their loved ones. The hallways are also designed with comfortable sitting areas for families.



A view of a nursing station in the McLeod Center for Intensive Care. The nursing stations are designed to allow nurses to have a clear view of every patient.

Medical Services provided in the Center for Intensive Care include:

- Trauma Surgical Care Unit (TSCU) for patients recovering from a serious accident or complicated surgery
- Medical Intensive Care Unit (MICU) and a medical step-down unit for patients who are suffering an acute illness, such as pneumonia, liver, kidney or lung diseases
- Coronary Care Unit (CCU), a specially equipped unit to treat patients with serious heart conditions
- Hemodialysis, a treatment for people who have chronic kidney disease and acute renal failure
- Telemetry, the team of technically trained individuals responsible for monitoring the heart activity of patients throughout the hospital

“Years ago, patients remained in the hospital for longer periods of time. The treatment process was slower and patients were not discharged until their illness was resolved. Many illnesses that required hospitalization are now treated on an outpatient basis. We are successfully caring for patients today who might not have survived years ago.”

In recent years, the demand to provide critical care to patients in the region has increased dramatically. “Patients at outlying hospitals who were critically ill, in need of heart surgery or who had experienced a trauma, were unable to be transferred to us for medical care because we had reached capacity,” continued Segars. “They needed the level of care available here at McLeod and wanted us to care for them. It became a challenge to find ways to admit the additional patients especially when time is of the essence.”

The McLeod Center for Intensive Care, opening in the Summer of 2013, will

address the critical care needs of these patients. The new center is designed to provide an atmosphere of warmth, comfort, and security for patients as they continue through the healing process. For critically ill patients, the healing process includes a gradual awareness of their surroundings. The exterior glass will allow patients to re-orient themselves to day and night, reducing their confusion as their physical condition improves. An additional factor in the design of the center involved patient safety. Every patient room is open to the nursing unit with a glass wall allowing the nurses to have constant view of their patients.

“The expansion of intensive care services at McLeod Regional Medical Center is to meet the critical care needs of the communities we serve,” said Segars. The McLeod Center for Intensive Care includes 97 critical care beds and 60 progressive care beds. Prior to this expansion, 15 percent of beds at McLeod

Regional Medical Center were designated for intensive care patients. Upon the opening of the center that percentage will increase to 35.

For a family, having a loved one as a patient in an intensive care unit can create anxiety and fear. There are often many questions about what the future holds. The McLeod Center for Intensive Care provides the family with direct access to their loved one, helping to alleviate their concerns. Hallways are built on the outside of the patient rooms to allow private access and a location for caregivers to rest while remaining close to the patient.

“The care we provide is patient and family-centered,” continued Segars. “Each patient is unique, therefore, each plan of care is personalized to the patient’s condition. Family members are also an important part of the patient’s recovery process. They are included in the decision making and the rituals of care and

become a partner with the physician and nursing staff, not just a bystander.”

“Like each patient, every family is different with their own unique needs,” said Larry Adams, Director of the Medical Intensive Care Unit. “Our nursing staff works closely with families to ensure they understand the treatment being administered and teach them the essential duties of caring for their loved one. Members of the family become the primary caregivers when the patient returns home. It is important for them to feel at ease with providing basic care.”

The technology readily available complements the higher level of care. A self-contained boom system is installed in the ceiling of each patient room. This system is the center of energy – it carries the electricity, oxygen, and equipment needed to care for the patient eliminating the need to move a patient to another side of the room to access equipment.

As patients progress through the

healing process they are able to transfer to a Progressive Care Unit prior to the general nursing floor. “Progressive care is the transition period between intensive care to more standard care,” explains Segars. “The patient still requires an elevated level of care but has advanced in their recovery.”

In addition to the intensive care units, Hemodialysis Services are also located in the McLeod Center for Intensive Care. “Hemodialysis is a medical therapy that replaces kidney function,” said Kellie Akahara, Director of Nursing Hemodialysis. “We provide Acute Hemodialysis and Continuous Renal Replacement Therapy to critically ill patients. The relocation to the Center for Intensive Care gives us a state-of-the art dialysis center where we are able to care for a greater number of patients. We also have the addition of dialysis chairs that have heat and massage built into them. This allows for a more comfortable and

relaxing dialysis session for the patients.”

The McLeod Center for Intensive Care is an example of the McLeod commitment to the core values of Caring, the Person, Quality and Integrity. “We are continuously finding ways to meet the needs of the communities we serve, elevate the level of medical care for the patient, and involve the family every step of the way,” added Segars.

Raising Vascular Care to a New Height

The McLeod Vascular Hybrid Surgical Suite combines advanced radiologic technology with cutting edge surgical equipment for both diagnostic and surgical treatment.



Several high-definition monitors provide McLeod Vascular Surgeons with multiple views of the surgical area.



Dr. Cunningham performs a vascular procedure in the new hybrid OR.



by Tammy White

The human body has millions of blood vessels, many of them barely visible to the naked eye. When an area in the vessel becomes blocked, cutting off blood flow, it takes a talented vascular surgeon and a high level of innovative technology and equipment to perform lifesaving procedures on patients suffering from vascular disease.

Today, McLeod Vascular Surgeons can perform vascular procedures and if necessary surgery all in the same room. This is beneficial because, if a life threatening situation should arise critical minutes are not lost moving the patient or prepping an operating room.

The McLeod Vascular Hybrid Surgical Suite, designed specifically for the care of the region's vascular patients, opened in December of 2012. The surgical suite is considered hybrid because it combines advanced radiologic technology to diagnose vascular disease with cutting

edge surgical equipment to immediately treat the condition **surgically**. In addition, McLeod Vascular Surgeons can perform vascular procedures and surgery in this OR, **both invasively and non invasively**.

McLeod Vascular Surgeon **Dr. Christopher Cunningham** recalls that when he joined McLeod in 2006, the vision of an operating room that would combine X-ray imaging and surgery into one area was just beginning to be discussed.

Before the McLeod Hybrid Suite's existence, many procedures were performed by the McLeod Vascular

Surgeons in the Special Procedures area in Radiology. Vascular procedures require X-ray imaging to guide the catheter through the patient's arteries to clear a blockage. If at any time the surgeon determined that the patient required immediate surgery, the patient was transported to an Operating Room.

"With the growth and expansion of the McLeod Heart and Vascular Institute, our program needed an OR better equipped for the performance of intricate lifesaving vascular treatments on patients," Jack O'Connor, McLeod Vice President of Cardiovascular Services.

Designing a room that would be most beneficial to its operators required a task force of representatives from several areas, including: operating room technicians, anesthesia, radiological technicians, biomedicine staff, nurses, and administration. It was important to gather input from not only the surgeons who would be performing the surgeries, but the support services as well.

This group of medical professionals visited other hospitals with hybrid suites to research equipment such as lighting, surgical tables, equipment storage units, monitoring devices and radiological imaging equipment. The hybrid rooms themselves were viewed for size, layout and design. Questions were asked to inquire what these hospitals liked about their current hybrid suites and what improvements they felt were needed.

Upon completing their research, the team met with architects to assist with the design of the McLeod Vascular Hybrid

Surgical Suite. The result has been a state-of-the-art vascular surgical suite with sophisticated equipment not previously seen in this region.

"Through diligent teamwork, this forward thinking clinical group helped create and design a hybrid surgical suite that accommodates all of our surgical needs to provide the best vascular care to our patients," said Dr. Cunningham.

One of the procedures performed in this hybrid surgical suite includes aneurysm repairs. An aneurysm is a weak area in a blood vessel wall that causes the blood vessel to bulge or balloon, which can result in a rupture if not repaired. Another procedure is treatment for peripheral vascular disease, or blockages in the blood vessels in the legs. Both of these procedures require access to X-rays to ensure precise and safe treatment.

"The X-ray technology available in the hybrid suite is incredible," said Dr. Cunningham. "The software installed

also minimizes the radiation dose to the patient by imaging the body from multiple angles in a single rotation. This decreased exposure to radiation is safer for the patient.

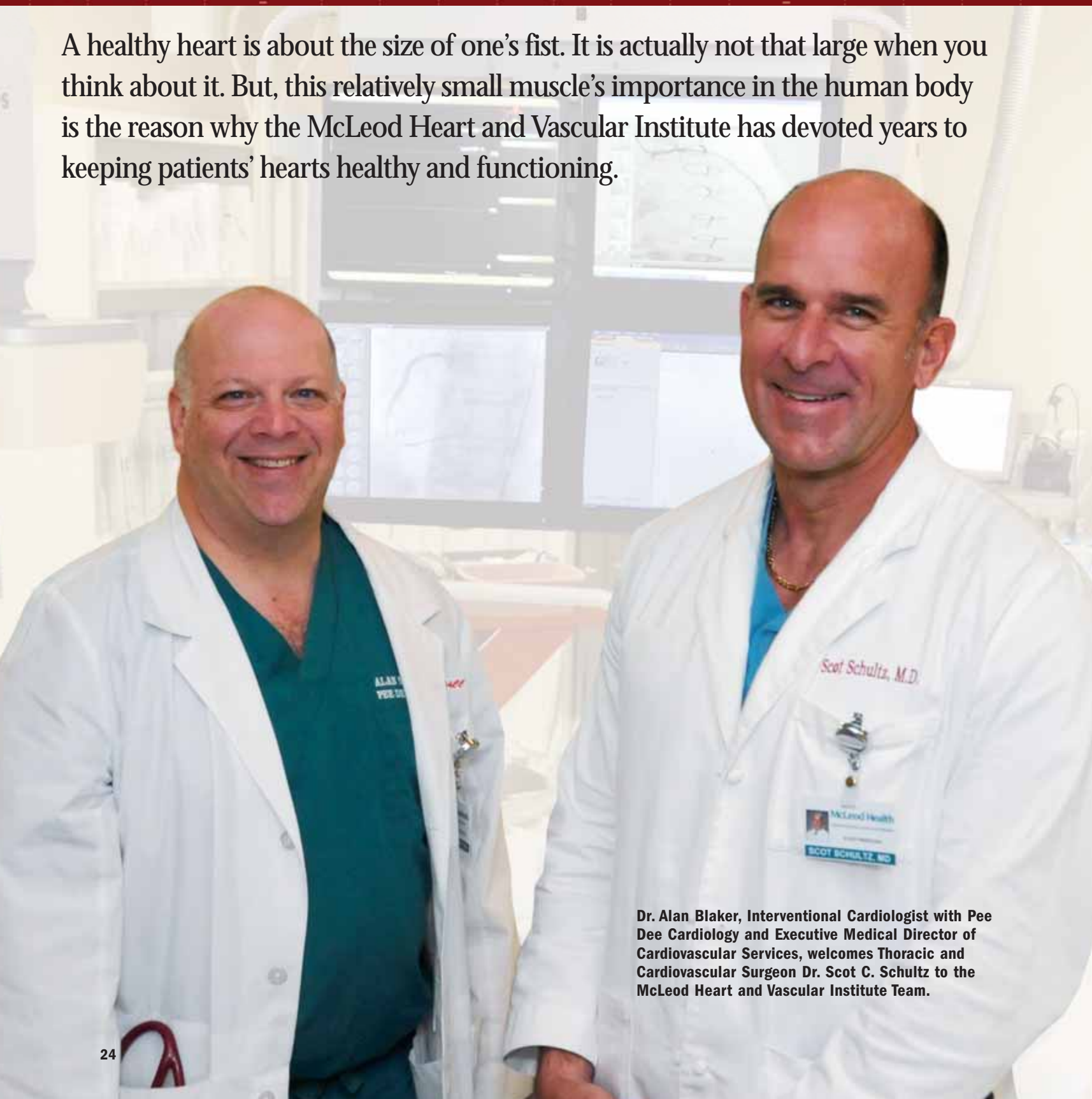
"For vascular surgery, precision and detail are critical," said Dr. Cunningham. "This operating system has extremely fast image processing and playback – images can be viewed in just five seconds. The large, flat-panel, high-definition monitors also provide excellent visibility of even the tiniest blood vessels. In addition, these enhanced features contribute to shorter procedure times for the patients."

The hybrid OR is designed to care primarily for vascular patients but it can accommodate cardiothoracic surgeries if necessary. "The hybrid suite is located within the McLeod Heart and Vascular Institute," said O'Connor. "It is just steps away from the Cardiac Day Hospital where patients receive care before and after surgery and the Cardiovascular Intensive Care Unit for those patients requiring more extended care."

Guardians of the HEART

by Tammy White

A healthy heart is about the size of one's fist. It is actually not that large when you think about it. But, this relatively small muscle's importance in the human body is the reason why the McLeod Heart and Vascular Institute has devoted years to keeping patients' hearts healthy and functioning.



Dr. Alan Blaker, Interventional Cardiologist with Pee Dee Cardiology and Executive Medical Director of Cardiovascular Services, welcomes Thoracic and Cardiovascular Surgeon Dr. Scot C. Schultz to the McLeod Heart and Vascular Institute Team.

The first line of defense in protecting the heart often begins in the Emergency Department. Patients who arrive with chest pain, or symptoms that could be characteristic of a heart attack, are rapidly evaluated by the qualified medical professionals of the accredited McLeod Chest Pain Center. This evaluation is designed to quickly recognize those suffering a heart attack and provide optimal care when seconds count.

"Chest pain is one of the main symptoms of a heart attack," said **Dr. Jeremy Robertson**, Medical Director of the McLeod Emergency Department. "The pain can be severe or just a mild feeling of discomfort or pressure. I would encourage anyone experiencing chest pain to be evaluated by a medical professional. Chest pain can also be a sign of coronary artery disease, which can lead to a heart attack."

Many people think it cannot happen to them – they exercise, eat right, see their physician regularly. However, the reality is that each year in the United States, nearly 400,000 people experience a heart attack.

When a heart attack strikes, it is critical that blood flow be restored to the heart in a timely manner. If a heart attack is suspected, the first phone call should always be to 911. Cardiac care can begin as soon as Emergency Medical Services (EMS) arrives on the scene.

LIFENET

To assist EMS in expediting care, McLeod has installed the LIFENET System in the Emergency Department.

LIFENET is the first web-based data network of its kind designed to connect EMS teams and hospital personnel with emergent patient data. It enables paramedics in the field to alert hospital care teams and provide them with critical patient information so they can quickly identify heart attack patients and have staff prepared before the patient arrives; reducing time to treatment.

EMS crews in the field use a cardiac monitor/defibrillator to obtain an Electrocardiogram (EKG) of the heart. The EKG report is then securely transmitted over the internet to the McLeod Emergency Team. They are able to view the patient data and share it with other care teams immediately. This ease of communication saves critical time, which is especially important when activation of the Cardiac Catheterization Team is required.

"The LIFENET System helps us reduce time to treatment for heart attack patients," explains **Dr. Alan Blaker**, Interventional Cardiologist with Pee Dee Cardiology and Executive Medical Director of Cardiovascular Services.

"Studies show that time from onset of symptoms to treatment is critical to improving survival and outcomes for these patients. Having this new system enables us to better meet the guidelines of treatment as recommended by the American Heart Association and the American College of Cardiology."

Ninety (90) minutes is the standard of care for what is called the 'door to balloon time.' This amount of time – opening a

blocked artery within 90 minutes – is the golden opportunity for the best possible outcomes. At McLeod, the average 'door to balloon' time is 56 minutes, offering patients a faster intervention than the national standard of care.

It takes a dedicated team to treat patients this quickly. From Emergency Medical Services to the Emergency Department and Catheterization Laboratory to the physicians of Pee Dee Cardiology and Advanced Cardiology Consultants, these individuals help elevate heart attack care by working together as a team to reduce time to treatment for heart attack patients.

"Studies show that when the 'door to balloon time' is 90 minutes or less, patient outcomes significantly improve, and their hospital stays are shorter," said Jack O'Connor, McLeod Vice President of Cardiovascular Services.

Medical Experts

In 2012, the McLeod Heart and Vascular Institute expanded when Pee Dee Cardiology joined McLeod Health. This outstanding cardiology team includes five Interventional Cardiologists, six Cardiologists and two Electrophysiologists.

Recently, the Heart and Vascular Institute added another superlative medical expert to the team with the arrival of **Dr. Scot C. Schultz**, a board certified Thoracic and Cardiovascular Surgeon. Dr. Schultz joins **Dr. Gregory H. Jones** in caring for patients at McLeod Cardiothoracic Surgical Associates.

A Thoracic and Cardiovascular Surgeon performs any surgical procedure involving the heart, lungs and major blood vessels. These procedures include coronary artery bypass grafting surgery to correct blockages in the coronary arteries, heart valve surgery including repair and replacement as well as lung surgery.

Prior to joining McLeod, Dr. Schultz served as the Chief of Thoracic and Cardiovascular Surgery and Director of the Cardiovascular Recovery Unit at the NCH (Naples Community Hospital) Healthcare System in Naples, Florida. Under his guidance, this program achieved a 3-star rating by the Society of Thoracic Surgeons, which is awarded to the top 10 percent of all cardiac surgery programs in the country.

Dr. Schultz has been named one of the Best Doctors in America by Best Doctors, Inc., awarded the distinction as a US News Top Doctor in Thoracic and Cardiac Surgery by his peers, and received the Compassionate Doctor award by his patients. His 5-Star rating by Healthgrades is also the highest possible score awarded by this organization.

Dr. Schultz received his medical degree from the University of Miami School of Medicine in Miami, Florida. He completed his residency in general surgery at Georgetown University Hospital in Washington, D.C. and a Fellowship in thoracic and cardiovascular surgery at Wake Forest University/Baptist Medical Center in Winston Salem, North Carolina.

Surgical Expertise

Dr. Schultz has particular interest in minimally invasive surgical techniques such as valve repair/replacement as well as Off-Pump Coronary Artery Bypass Grafting Surgery (OPCAB).

With conventional coronary artery bypass grafting surgery, the patient's heart is stopped, but the blood continues to be circulated throughout the body with the aid of a heart-lung machine. With OPCAB, the surgery is performed while the heart is still beating, without the assistance of the heart-lung machine. This technique has been shown to have several benefits in the hands of experienced surgeons.

To reduce the movement of the beating heart, a mechanical stabilizer is attached to the surface of the heart. This device holds a portion of the heart still to allow the surgeon to sew the arteries (and veins) to the heart to bypass the blocked coronary artery. Meanwhile, the rest of the heart continues pumping and circulating blood to the body.

"Patients at high risk for complications such as stroke, heart attack and kidney failure seem to benefit the most from OPCAB as do those with impaired heart function and the elderly," said Dr. Schultz. "Studies have shown that the off-pump procedure dramatically reduces the risk of stroke and the development of pneumonia."

Another surgical specialty for Dr. Schultz is the minimally invasive mitral valve repair surgery. Mitral valve repair is used to treat leakage of the mitral valve. The mitral valve allows blood to flow into the heart's main pumping chamber, the left ventricle. When the mitral valve leaks, blood flows back into the lungs, which can lead to irreversible heart damage.

Minimally invasive valve repair surgery is performed through a small incision approximately four to six inches instead of six to ten inches for the traditional surgery.

Potential benefits of the minimally invasive option include: a reduction in



Dr. Jeremy Robertson, Medical Director of the McLeod Emergency Department, reviews a patient's cardiac EKG. This test is transmitted by EMS to the hospital before the patient's arrival through the new LIFENET data system.

pain, blood loss, and risk of infection; shorter hospital stays; faster recovery; quicker return to work and less scarring.

"McLeod has impressed me in so many ways," said Dr. Schultz. "They are focused on improving the quality of care in this region. Their reach is broad, touching nearly one million lives. By being part of the McLeod Heart and Vascular Institute, I have the opportunity to share my new techniques and processes with the existing talented group of medical professionals, impacting the cardiac care in our community."

"We are excited to have Dr. Schultz join the McLeod Heart and Vascular Team," said Dr. Blaker. "His skills, experience, and data driven team approach to cardiac surgical care will be a benefit to our team and to our patients. I look forward to working with him as we continue to strive to enhance the multitude of services offered in cardiac care."

DESIGNING A HEALING ENVIRONMENT

by Tracy H. Stanton



Photo (left): The open design of the new Cancer Center's Chemotherapy Infusion area will allow patients to interact with each other during treatment and view a healing garden enclosed by a water wall.

Photo (top): The waiting area of the new Center for Cancer Treatment and Research includes the relaxing features of water, trees and natural light.

Providing patients with an atmosphere that is warm and inviting can help reduce their anxiety during cancer treatment. The use of natural light, greenery, and sounds of cascading water are soothing features that provide comfort to patients and family members.

The team of medical professionals at McLeod kept these factors in mind as they worked to design the McLeod Center for Cancer Treatment and Research, nearing completion on the campus of McLeod Regional Medical Center.

Dedicated to the physical and emotional needs of cancer patients and their families, the center's design includes bringing the outdoors inside with trees and the rippling sounds of water falls. In addition, the finishes feature warm wood and pastel colors as well as a "river of life" pattern on the flooring that flows out from the water wall to the chemotherapy infusion area.

For those patients receiving chemotherapy infusion services on the first floor, they can look out the rounded

glass to view the beauty of a healing garden enclosed by a second water wall of tranquility. This provides a sense of healing, respite and quiet.

The center is also bringing all of the services a cancer patient would need into one central location. Easy access to McLeod Oncologists and Pulmonologists, nurse navigators, cancer research, infusion and radiation treatment, and the McLeod Cancer Clinic, provides patients and loved ones with high quality, individualized care and support.

The hallway connecting the new Cancer Center to the McLeod Tower also allows patients and visitors to access a library where they can learn more about their condition; a pharmacy so they can pick up their medications after seeing the

oncologist; the McLeod Color Me Pink Boutique, which offers free wigs and breast prosthesis to patients; and the Spa at McLeod for patients or family members to take advantage of a relaxing massage or other therapeutic service.

In addition to the construction of the new center, the Oncology and Hematology inpatient unit has relocated to the newly remodeled seventh floor of the McLeod Tower. These renovations include larger, more spacious patient rooms to accommodate patient care as well as family members and visitors. Each room also offers a recliner and sleeper sofa for families to comfortably stay by their loved one's side.

The new McLeod Center for Cancer Treatment and Research is scheduled to open in late fall of 2013.

STRENGTHENING *Quality of Life*

by Kristie Salvato Gibbs

The lifesaving benefits of cancer treatments such as chemotherapy, radiation therapy, and surgery save the lives of thousands of patients each year. While these efforts serve to eliminate the disease, they often cause fatigue, difficulty with memory, muscle pain, weakness, and other issues that may affect a cancer survivor's quality of life. It has been shown that rehabilitation before or during cancer treatment can reduce these effects, enhance the patient's recovery and help individuals return to the activities they enjoy.

The McLeod Oncology Rehabilitation Program or STAR (Survivorship Training and Rehabilitation) is a unique cancer rehabilitation program designed to minimize the side effects of cancer treatment, and support cancer survivors in functioning at the highest level possible.

"Rehabilitation can help with a person's overall health regardless of whether they are newly diagnosed, undergoing cancer treatment, or long-term cancer survivors," said Harriet Jeffords, Director of McLeod Rehabilitation Services. "As a cancer survivor, I am proud that McLeod is offering a rehabilitation program that can help improve cancer symptoms and a person's daily functioning. I know during my treatment, I would have personally benefited from this type of program."

The McLeod STAR program is offered by a group of trained medical experts from physical and occupational therapy, speech pathology, oncology, social work, infusion, radiation oncology, breast health services, and pastoral care who work with each patient to develop a personalized rehabilitation plan.

McLeod Physical Therapist Shauna Krawiec assists Bobbie Batchelor with arm and leg strengthening exercises during a physical therapy session.



"At McLeod, we understand how the side effects of cancer treatment, such as fatigue, chemotherapy-induced peripheral neuropathy (a nerve disorder that can cause weakness, numbness, tingling and pain in the hands and feet), difficulty with memory or concentration, muscle aches, bone or joint pain, lymphedema, weakness and balance problems, can affect a person's quality of life," said Ashley Atkinson, Senior Occupational Therapist and McLeod STAR Program Coordinator. "We strive to reduce the side effects and improve the lives of cancer survivors."

Bobbie Batchelor of Florence has first-hand experience with the side effects of cancer treatment. Bobbie was diagnosed with breast cancer on November 14, 2011, her birthday. She underwent surgery for the removal of two tumors. Additional cancer treatments were not necessary at that time.

Nearly a year later, cancer was again discovered and a second surgery was performed for the removal of another tumor. This time, chemotherapy was recommended.

Prior to her experience with cancer, Bobbie was a very active 76-year-old. She enjoyed water aerobics, outings with her friends and activities at her church. However, after receiving lifesaving surgery and chemotherapy, Bobbie began to experience a few of the expected side effects of these treatments. She had numbness in her hands, neuropathy in her legs and her appetite diminished.

Bobbie heard about the STAR program and requested a referral from her Oncologist, **Dr. Michael Pavy** with McLeod Oncology and Hematology Associates. She began therapy in January of 2013 during a break between chemotherapy treatments. At the beginning of her four weeks of therapy, Bobbie worked with McLeod Physical Therapist Shauna Krawiec to design a

rehabilitation plan that was specific to her needs and goals.

"I went to physical therapy two days a week," said Bobbie. "The first few visits were challenging, as I expected, but Shauna understood what I was experiencing and knew exactly how to care for me. She recognized right away that my balance was not very good and took extra measures to ensure my safety."

Throughout her therapy sessions, Bobbie performed exercises to increase her strength and appetite, improve her balance and decrease pain and fatigue. She gained strength in her body and began to feel better overall.

"The therapists taught me exercises and other techniques that I can do at home to help make life so much easier," said Bobbie. "The compassion and thoughtfulness shown to me by the McLeod Rehabilitation Team made me feel more relaxed and gave me the desire to help myself."

McLeod Outpatient Rehabilitation also offers a Prehab component to the STAR program. "Prehab is designed to help newly diagnosed cancer patients get stronger and feel as well as possible before starting treatment," said Ashley. "There are also strategies to help reduce stress and improve their strength in order to prepare them for any upcoming treatments such as surgery, chemotherapy and radiation therapy."

McLeod Regional Medical Center, the only hospital in eastern South Carolina to offer this program, earned the STAR Program® Certification from Oncology Rehab Partners, experts in the field of survivorship care. The STAR Program Certification training for McLeod Regional Medical Center staff was made possible through a grant provided by the McLeod Health Foundation.

Cancer treatment is not yet complete for Bobbie. She is presently undergoing a second round of chemotherapy.

Upon its conclusion she looks forward to returning to McLeod Outpatient Rehabilitation for Occupational Therapy where she will work on a goal of strengthening her hands.

"I like to crochet," smiled Bobbie. "Gaining more strength in my hands to crochet again is a goal of mine and Occupational Therapy will help me reach that goal. The therapy I received through the STAR program has helped me maintain independence. I also found it to be an encouraging experience and my quality of life is better because of it."

THE BENEFITS OF ONCOLOGY REHABILITATION

- Decrease in Pain
- Reduction in Fatigue
- Increase in Energy and Endurance
- Improvements in Balance and Walking
- Improvements in Swallowing, Eating and Speech Problems
- Increased Strength
- Management of Swelling caused by Lymphedema
- Improvements with Memory and Concentration
- Improved Mood and Quality of Life

A Team You Can Trust

by Tracy H. Stanton



The McLeod Radiation Oncology Team provides the highest level of quality and radiation safety to its patients, according to the American College of Radiology.

When a patient is diagnosed with cancer, a myriad of emotions and questions go through their mind. One of those questions concerns “Where should I go for treatment?” Patients will often turn to family and friends, co-workers, their physician and the internet to explore their options. They want to know that the care and treatment they are going to receive is personal and safe.

The McLeod Cancer Team understands this need and strives to personalize care to the patient. Each week at McLeod, the cases of cancer patients are presented to the Cancer Conference Board, which includes oncologists, pathologists, radiation oncologists, radiologists, and surgeons. As a team, these physicians discuss the cases presented and recommend what treatment plan is going to work best for each patient and their disease.

One way the team works to improve patient care is by pursuing accreditation of its cancer programs to demonstrate that the Cancer Center provides the highest level of quality and safety both nationally and locally.

In April, **Dr. James R. Daniel, FACS**, a physician surveyor for the Commission on Cancer of the American College of Surgeons, visited McLeod Regional Medical Center to evaluate the Cancer Center and Breast Program for re-accreditation. Dr. Daniel is the medical director of the Mary Washington Healthcare Regional Cancer Center in Fredericksburg, Virginia.

During the survey, he said, “The McLeod Cancer Center for Treatment and Research is one of the best cancer programs I have seen.”

Approximately 70 percent of all newly diagnosed cancer patients in the United States are treated in a hospital accredited by the Commission on Cancer. Of the more than 5,000 hospitals in the United States, only 1,500 are accredited. McLeod has been accredited for more than 35 years and remains the only accredited hospital in the Pee Dee Region by the Commission on Cancer.

The McLeod Breast Health Center first achieved accreditation from the National Accreditation Program for Breast Centers (NAPBC) in 2010. This accreditation confirms that McLeod meets or exceeds all national standards in the treatment of



McLeod Breast Health Nurse Navigator Maureen Byrd offers assistance and education on breast cancer to women like Susan Baxley.

breast cancer and further demonstrates that McLeod provides the highest level of quality breast care available to women in the region.

In his summary remarks on the survey, Dr. Daniel noted that McLeod offers an “outstanding, well constructed, collaborative breast cancer program. Their navigation program excels under a well trained, organized and experienced nurse navigator. The breast team’s ability for self analysis, collection of data and action based on the data is remarkable. Their extensive use of grant programs to support patient care initiatives that are non-revenue producing is also innovative.”

In early 2013, the McLeod Radiation Oncology Department also earned national approval of its program. Achieving the American College of Radiology (ACR) accreditation demonstrates that the McLeod Radiation Team provides the highest level of quality and radiation safety to patients.

McLeod is one of only seven ACR accredited Radiation Oncology centers in South Carolina, and one of only 455 in the United States out of 3,200 radiation centers.

“The surveyors who evaluated our program included a Radiation Oncologist and a Medical Physicist. They reviewed

our entire treatment process which includes the care plan, whether the treatment is appropriate for the patient’s condition, patient follow-up and our equipment to ensure that all aspects of patient care are of the highest quality,” said McLeod Radiation Oncologist **Dr. T. Rhett Spencer**. “Receiving this accreditation is an indicator that the McLeod Radiation Oncology Team is committed to providing our patients with the best possible care, maximizing results and minimizing risks.”

“These are impressive accomplishments that require the work of an entire team,” said Judy Bibbo, Vice President of Patient Services. “It takes an exceptional team to provide patients with the safest and most effective cancer treatment. The McLeod Cancer Team offers this level of care each day while holding a patient’s hand or offering words of reassurance.”



NATIONAL ACCREDITATION PROGRAM FOR BREAST CENTERS

“Grade A” is Our Standard

by Rachel Gainey



McLeod Dillon Rated Among the Nation's Top Hospitals

Above (left to right): Jessica Strickland, Respiratory Therapist; Dr. Mamdouh Mijalli, General Surgery; Dr. Michael Sutton, Orthopedics; Christie Hunt, RN; Dr. Phillip Wallace, Internal Medicine; Angela Daney, RN; Dr. Walter Blum, General Surgery and Dr. Rebecca Craig, Obstetrics/Gynecology.

At McLeod Dillon, quality is a focused, relentless pursuit to improve the delivery of care to patients and their families.

Recently, hospitals across the nation were graded based on their quality performance by the Leapfrog Group, an independent, national not-for-profit organization founded by the nation's leading employers and private healthcare experts.

McLeod Dillon received an “A” for its overall capacity to keep patients safe from infections, injuries, and medical or medication errors.

The “A” score McLeod Dillon received was awarded in the latest update to the Hospital Safety Score.SM The A, B, C, D or F scores are assigned to U.S. hospitals

Fewer than 30 percent of rated hospitals were awarded an “A” grade.

based on preventable harm and medical errors. The Hospital Safety Score is compiled under the guidance of the nation's leading experts on patient safety. It is designed to give the public information they can use to protect themselves and their families.

Dr. Michael Sutton, Orthopedic Surgeon and Chief of Staff for McLeod Dillon, explains, “The culture at McLeod Dillon is driven by the constant pursuit to improve patient care. I am proud to be a part of an organization that is being recognized nationally for quality. I am also pleased that I could make a contribution in helping to achieve this milestone. Improving the quality of life for patients is the reason physicians choose to practice medicine, and we are accomplishing that each day at McLeod Dillon.”

The mission of the Leapfrog Group is to encourage giant “leaps” forward in the safety, quality and affordability of healthcare in the U.S. by promoting transparency and value-based hospital incentives.

“Our patients expect the safest care possible from us,” said **Dr. Mamdouh Mijalli**, a General Surgeon at McLeod Dillon. “We have designed our care plans using what we know from evidence-based best practices to be the gold standard. We constantly measure results and outcomes to determine the effectiveness of these care processes. We also have multiple layers of quality oversight.

“It is truly an honor to practice medicine at such a highly respected organization as McLeod Dillon,” Dr. Mijalli said.

Debbie Locklair, Administrator of McLeod Dillon, says, “McLeod Health continues to be the choice for medical excellence because of the intense focus we place on quality and patient safety at each McLeod facility. Being recognized as part of this elite group by Leapfrog speaks highly of our mission to deliver quality healthcare to patients each day.

“I commend our employees and medical staff members for devoting their considerable skills and talents to the selfless service of others. I’m also grateful to our patients and community who entrust us with their care.”

In the healthcare improvement process, McLeod Dillon follows the McLeod Health model of quality that engages physician, staff and leadership in processes to improve care. Throughout the McLeod Health organization, there is a commitment to create a patient care experience that is safe, timely, patient-centered, effective, efficient and equitable for every patient, every time.

“The high quality healthcare a patient receives in Dillon is equitable to any larger facility,” said **Dr. Phil Wallace**, Medical Director of Clinical Effectiveness. “In fact, we stand out among other hospitals in efficiency. For example, I had a patient come in with a possible diagnosis of cancer. A CT scan was quickly performed, and I was able to tell him immediately that it was not cancer. He was able to go home that night relieved.

“Over the past years, as evidence-based, best practices have evolved, we have implemented them at McLeod Dillon. We adopt these practices because our patients deserve the highest level of care. As a result, we achieve better outcomes, such as a decrease in mortality,” continued Dr. Wallace. “The implementation of this work must be a goal of each employee and physician. One strong leader cannot do it. It takes everyone involved having the

same genuine concern and commitment. At McLeod Dillon, our team is receptive, supportive and proud to make that commitment to each patient that we care for at our facility.”

The improvement efforts at McLeod Dillon are also successful because of the commitment of each employee. “I am fortunate to work for such a great organization,” said Angela Daney, a Medical-Surgical Care Nurse. “Attention to quality care and improvement has long been an essential component of healthcare. While the medical team serves a crucial role in the quality improvement process, it is not simply the work of nurses or physicians. It involves the entire organization to go above and beyond for patients and their families.”

Respiratory Therapist Jessica Strickland, adds, “I work side by side with physicians and staff who demonstrate great care and compassion. Our patients come to McLeod Dillon because they trust the care we provide. I am privileged to be part of such an amazing group. Quality and safety are measures we strive for each day, and the Leapfrog rating recognizes that hard work and dedication. McLeod Dillon is where I choose to work as well as receive my health care.”

“Caring for patients in a rural healthcare setting gives you the flexibility and time to devote to each patient individually. Our goal at McLeod Dillon is to provide the very best care to each and every patient. Through teamwork, we continually strive to meet each of their unique healthcare needs,” said **Dr. Rebecca Craig** with McLeod OB/GYN Dillon. “It is also an honor to work for an organization that places such high standards on both the delivery of care and the satisfaction of patients.”

The McLeod Dillon staff recognizes that a hospital stay is not part of a person's normal daily routine, and it is sometimes

unexpected. They also understand how important it is to develop relationships with patients and families.

“At McLeod Dillon, we treat every patient as if they were our mother, father, child or loved one. This is demonstrated in the quality of care that we provide to our patients,” said Christie Hunt, a nurse in the Operating Room. “Our mission to offer this level of care to patients is why I have been a member of the McLeod Dillon family for more than 15 years.”

The pursuit of quality improvement at McLeod Dillon is unending. There is much to achieve as the staff seeks to improve the health of the people living within South Carolina and eastern North Carolina.

“Collectively, we take pride in this accomplishment,” said General Surgeon **Dr. Walter Blum**. “It is a positive step in our quality journey, yet we recognize that you can never stop improving care for patients. Healthcare is constantly becoming more complex and challenging, but our team is committed to providing the best care possible to our patients now and in the future.”

MCLEOD DILLON:

DEMONSTRATING THE VALUES OF CARING, PERSON QUALITY AND INTEGRITY

Individualized patient-centered care is a reflection of how McLeod staff members communicate and demonstrate the McLeod Values of Caring, Person, Quality and Integrity each day. This type of approach is designed with the patient as a partner in care.

TRACTION ROCKS

by Tracy H. Stanton

Imagine leaning over to pick up a magazine on your coffee table and being hit with an explosion of excruciating pain in your back and down both of your legs. This simple movement is exactly how **Dr. Cathy Layne's** journey with back pain began two and a half years ago.

Immediately following her first occurrence with back pain, Dr. Layne said she could barely sit for nearly two weeks.

"I tried ignoring it and toughing it out, hoping it was a minor injury and it would go away with time," Dr. Layne explained. "As the pain continued to return, I used medications, muscle relaxants, and heating pads, – all of which helped a little at the time. But, the pain would come back."

Dr. Layne also pursued a fitness program that she said helped a little by improving her muscle control, but the pain persisted.

"The pain completely changed my life. I was previously very active and athletic but I could no longer go for walks without experiencing pain in my back and leg. It caused me to stop walking. I also gained a notable amount of weight due to my inability to exercise."

In addition to having issues getting a good night's sleep or doing housework, Dr. Layne said even something as simple as holding her cat was difficult. "If I leaned back just the slightest bit, I would feel a pinch in my back, and my left leg would go numb."

Driving long distances had also become impossible. "When I moved to

South Carolina from West Virginia to begin work at McLeod Behavioral Health Services, I had to pay a moving company to transport my car. I came here by airplane because I could not drive for that long."

As a psychiatrist, Dr. Layne often sits and talks to patients for hours at a time. "I had to talk to patients while standing or walking around them. This felt rude and inappropriate, and I'm sure it was uncomfortable for my patients as well."

"I was taking breaks to walk out the pain or I would go lie flat on my back in my office. I was also getting behind on paperwork because I could not sit long enough to complete it."

By the end of each work day, Dr. Layne said she would be limping, and her left leg would feel numb and "tingly."

Eventually, Dr. Layne turned to an alternative option with chiropractic care. "This relieved some of the pain but it did not help with the bulging disc in my back. Surgery was also suggested, but I wanted to pursue all non-invasive options first."

Dr. Cathy Layne is grateful to David Barnes and the McLeod Darlington Rehab Team for helping completely eliminate her back pain.



In between each of the vertebrae in the spine are intervertebral discs that are soft, round pads. When one of these slides out of place, it results in a herniated or bulging disc which leads to severe pain.

After trying everything short of surgery, Dr. Layne turned to a colleague on the campus of McLeod Darlington for advice.

David Barnes is Director of Rehabilitation Services at McLeod Darlington. "Before coming to rehab, Dr. Layne had pursued a number of options to relieve her pain but nothing had helped her long term."

David determined that Dr. Layne was suffering from Sacroiliac (SI) Joint Dysfunction in addition to the bulging disc in her back. The SI joints connect the pelvic bones to the spine. When one of these joints is injured, chronic pain results.

McLeod Darlington Rehabilitation Services offers a unique treatment option for patients with acute or chronic disc problems. Using what he refers to as a manual approach to physical therapy, David talked with Dr. Layne about the hospital's 3D Active Trac table.

A non-surgical treatment for the back and neck, the table combines traction and three-dimensional movement all in one device. It is considered three dimensional because it adjusts for extension, rotation and side-bending.

"This is a very good treatment," explained David. "It is designed to take pressure off of structures such as nerves in the back and neck that are causing pain. As the patient lies on the table, the machine slowly applies traction to stretch and release tension and pain. For example, if back pain is a result of pressure on a nerve, the traction force helps relieve the pressure."

"We use traction as an effective way to centralize a patient's pain and correct



The 3D Active Trac Table at McLeod Darlington uses traction to stretch and release pressure and pain in a patient's neck or back.

painful posturing to allow the patient to initiate extension exercises," added David.

Conditions that can be treated with the traction table include back pain, neck pain, herniated disc, degenerative disc disease, spinal deformities and sciatica.

David began treating Dr. Layne on October 11, 2012, with the traction table and supplemented this therapy with exercises and education on body mechanics. "The way I sat, walked, even brushed my teeth had all been worsening the pain instead of helping it," said Dr. Layne.

Dr. Layne agreed that the first day on the traction machine was hard but she pushed through the discomfort. "My muscles fought against the stretch and I experienced back spasms at the completion of the initial treatment. After each therapy session, the pain would decrease more and I actually came to enjoy the traction table."

As her body adapted to the stretching, Dr. Layne said she gained range of motion in her back. "I was amazed at how much of my life I had regained in just three

weeks. I caught up on my work, decorated the house for Christmas by myself, and started exercising again."

"Using this system, we are now able to accommodate more acute patients at McLeod Darlington," added David. "Too often therapy becomes a last resort instead of the first option. My goal is for patients and physicians to consider physical therapy earlier in the process to relieve severe back pain."

Dr. Layne also advises others who are suffering with chronic pain to be proactive. "Do not wait until nothing else works. I could have been out of pain two years ago if I had pursued physical therapy first."

She now tells those she meets who are suffering with chronic back pain to try this therapy. As she puts it, "Traction rocks!"

The Front Door of the Hospital

by Tracy H. Stanton



When intense pain strikes suddenly in the middle of the night, the average person will try to relieve it on their own with over-the-counter medication or attempt to wait it out until the morning when their physician's office opens. But, when they double over in pain a second time and are unable to speak until the pain subsides, it is often a family member who says, "We are going to the hospital right now."

A trip to the Emergency Department can be unnerving and is sometimes frightening for patients. Whether it is the first visit or a recurring one resulting from the effect of a debilitating illness, families in emergency medical situations are vulnerable, apprehensive and sometimes confused.

Nearly 150,000 patients enter through one of the four McLeod Health Emergency Departments annually. McLeod Health, for more than a century, has been committed to the emergency and medical needs of its residents as well as those visitors traveling to other destinations, interrupted by unexpected trauma or sudden health issues.

McLeod Health teams are currently working to raise the standard of care and patient flow in its Emergency Departments, driven by the understanding that it is indeed the "front door" to each hospital.

"We are adopting clinical and operational strategies to enhance service and quality offered by our Emergency Departments," said Rob Colones,

President of McLeod Health. "Each patient is unique and important; therefore, we will continue to work hard to bring the best care possible to our patients in areas such as patient response times, privacy and safety."

McLeod Regional Medical Center

The Emergency Department (ED) at McLeod Regional Medical Center is one of the busiest in South Carolina. Around 65,000 people come to the McLeod ED each year seeking care.

"We started our improvement work in October of 2012 with the Emergency Department management team and the ED Medical Staff," said Marie Segars, Senior Vice President and Administrator of McLeod Regional Medical Center. "We divided our work into two categories: smart improvements and healthy improvements."

"Smart improvements use problem solving, operational effectiveness and staff teams to address challenges in work flow, expediting technology to diagnose and treat, and matching resources to demands. Healthy improvements are aimed at empowering our teams all along the pathway our patients travel."

Will McLeod, Associate Vice President of Emergency Services, explains, "Our focus on smart workflow has included treating less acute patients in a separate area within the ED to reduce their wait time and length of stay, improving the triage process to reduce the time from the patient's arrival to being seen by a nurse, matching staffing to times of higher demand, streamlining supplies and equipment and focusing on delays with diagnostic testing."

"Our healthy solutions have included the development of a steering team, daily communication, and other departments' commitment to assisting with patient flow. We also put in place a daily check-in call."



McLeod Family Medicine Resident Dr. Cliff Bolinger examines Parker Jenkins at the After Hours Clinic for Children.

“During this call, our leadership, Emergency Physicians and Nursing Supervisors as well as other key departments like Environmental Services, Hospitalists, Case Management and the staff who track patient flow, gather for a 10 minute check-in on the status of patient care that day. This allows the Emergency Department staff to update the team on how the processes are working and enables the group to real-time problem-solve any issues as they occur,” added McLeod.

This improvement work is making a difference. To date, the average time from arrival in the Emergency Department to being seen by a nurse has been reduced from 29 minutes to five minutes and the average time from triage to placement in a room has been reduced by 24 minutes, a 40 percent improvement. The team has also been working hard to improve the length of time for moving a patient being admitted from the ED to the floor or unit.



McLeod Seacoast Registration Representative Margaret Stonestreet uses her radio earpiece to inform an Emergency Department nurse that she has registered a patient for treatment.

They have decreased this time by more than an hour.

Other departments in the hospital have also stepped up to support the Emergency Department. One example is the After Hours Clinic for Children that the McLeod Family Medicine Center is now offering. The Clinic is open Monday through Thursday from 4:00 p.m. to 7:00 p.m. for sick child visits. There is no appointment necessary and the child does not have to be a current patient of the McLeod Family Medicine Center to be seen at the clinic.

The MRMC Emergency Team is now in the process of moving to electronic medical records and working toward development of a patient management tracking system to help improve care.

McLeod Loris Seacoast

McLeod Loris Seacoast is taking extra strides to evaluate and improve the service provided to its patients. While improved patient satisfaction scores indicate the needs of patients and their families are being met, the hospitals are continuing to implement changes in the process they use to treat patients in the Emergency Department.

“A large percentage of our admissions come to our hospitals through the Emergency Department,” said Dick Tinsley, Administrator of McLeod Loris Seacoast. “This is their first impression of our efficiency, quality and service.

“We understand that the first impression is always the most lasting, so we have reviewed our Emergency Department flow process and identified areas where we can improve the registration process and decrease wait times.”

Shannon Godwin, Director of the Emergency Department for McLeod Loris Seacoast, said, “Patients come to the Emergency Department because they need immediate medical care.

Our goal is to get the patient into a room and seen by a physician as quickly as possible.”

In an effort to decrease wait times, the Registration and Nursing staffs are now equipped with radio earpieces that allow them to communicate in “real time” as patients come into the Emergency Department. Improving communication between these two groups is expediting the patient care process.

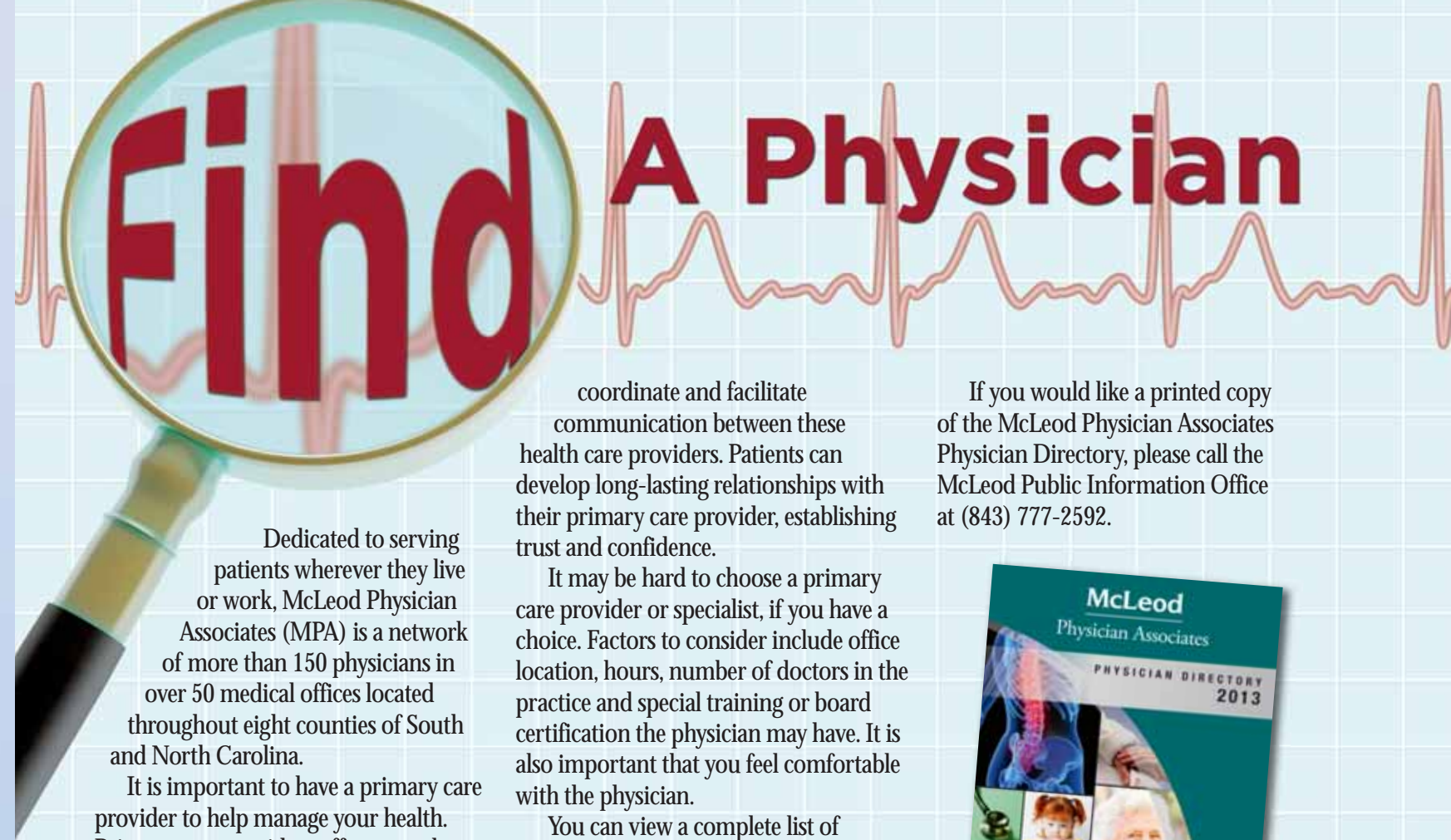
McLeod Dillon

When surveyed for patient satisfaction, the majority of patients give a positive response when asked if they would recommend the McLeod Dillon Emergency Department (ED) to their friends and family. The team is working hard to ensure that every patient experience in the ED is positive.

“Currently, a large part of our focus is to prepare to move from a paper system in the Emergency Department to an electronic medical record system this summer,” explained Debbie Locklair, Administrator of McLeod Dillon. “Electronic documentation impacts every step in our ED process including medication delivery, submission of orders and results to/from ancillary patient departments, and registration.”

“We are also prioritizing the improvement of ‘door to doctor’ time, defined as the time it takes for the patient to be seen by a doctor or mid-level provider,” said Teresa Sapp, Director of Critical Care Services

“In this improvement work, our medical units are working together for a common goal of moving admitted patients from the ED to the floor. As patients are admitted by the ED physician, each unit strives to get the patient to the assigned bed quickly and efficiently, giving the ED more capacity to care for other patients,” added Sapp.



Dedicated to serving patients wherever they live or work, McLeod Physician Associates (MPA) is a network of more than 150 physicians in over 50 medical offices located throughout eight counties of South and North Carolina.

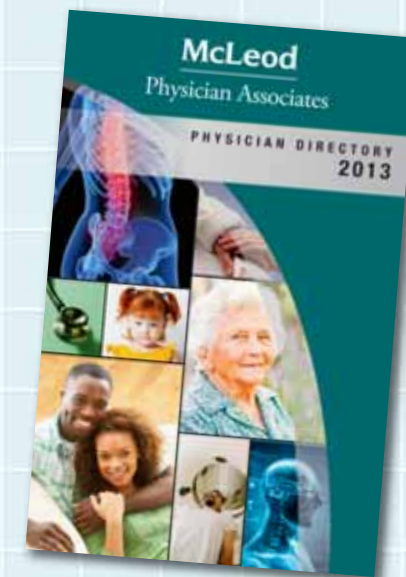
It is important to have a primary care provider to help manage your health. Primary care providers offer general medical care to patients, and are specially trained to care for a vast array of illnesses as well as work with patients on preventative measures. They also help patients with referrals to specialists, and

coordinate and facilitate communication between these health care providers. Patients can develop long-lasting relationships with their primary care provider, establishing trust and confidence.

It may be hard to choose a primary care provider or specialist, if you have a choice. Factors to consider include office location, hours, number of doctors in the practice and special training or board certification the physician may have. It is also important that you feel comfortable with the physician.

You can view a complete list of McLeod Physician Associates physicians at www.McLeodPhysicians.org. On this website, you can access physician pictures, learn about their specialties or board certifications, and obtain practice contact information and directions.

If you would like a printed copy of the McLeod Physician Associates Physician Directory, please call the McLeod Public Information Office at (843) 777-2592.



The Importance of Bringing Your Medications to Doctor's Appointments

By Dr. Richard Alexander, Medical Plaza Family Medicine



Richard Alexander, MD

In order for physicians to provide patients with the most comprehensive and exceptional care, the physician must have an understanding of all the medications the patient is taking. Therefore, it is important for patients to bring all of their medications to each doctor's visit so they can be reviewed completely each time. Physicians hear patients say so often, “You know, I'm taking that little white pill.” Remember, there are a large number of little white pills.

Bringing your medications to your doctors' appointments is also important because many patients see multiple doctors, who may not all have access to the same medical record. Knowing all of the medications that you are taking helps physicians care for you appropriately and avoid any life threatening drug interactions.

VOICES *of* Relief

by Jenna Falls Cox

Chronic pain can rob an individual of enjoying the simple pleasures that life has to offer. Participating in physical activity, going to work and spending time with family can become unbearable if you are suffering from chronic pain.

In an effort to provide residents of Horry County and surrounding areas with a convenient option for treatment of chronic pain, McLeod Seacoast offers a pain management clinic staffed by Interventional Pain Management Specialists **Dr. Bruce Johnson** and **Dr. L.R. Perry** with Medical Anesthesia Consultants. Two of the region's most experienced physicians in interventional pain management procedures,

Dr. Johnson and Dr. Perry offer patients more than 25 years of combined experience. Their expertise paired with the nursing team's skills and knowledge makes Seacoast Interventional Pain Clinic an ideal choice for patients needing relief from chronic pain.

Living with chronic pain was not an option for Gerald Faulkner of Longs, South Carolina. "There is no reason to live

with pain in this day and age when there are simple treatments that can improve your quality of life," said Gerald.

Gerald has been a patient of Seacoast Interventional Pain Clinic since the clinic opened in January of 2011. In the past forty years, he has been in a number of automobile accidents, which have left him with lingering chronic pain. A retired revenue agent of the Bureau of Alcohol, Tobacco, and Firearms, Gerald moved from Virginia to the Grand Strand area nine years ago with his wife Harriet. A father of three children and grandfather to three grandchildren, Gerald stays active and enjoys fishing and hunting. However, when pain strikes him in the lower back and hip, at times it is hard for him to even walk.



Dr. L.R. Perry (center) and Dr. Bruce Johnson are pictured here with Gerald Faulkner, a patient of Seacoast Interventional Pain Clinic since 2011.

"It is nice to know that I am a part of improving a patient's quality of life."

– Sonya Zeigler, RN, NP

"When the pain intensifies and I have difficulty sleeping, that is when I know it is time for a visit to Dr. Perry."

Dr. Perry has treated Gerald by performing radiofrequency ablation, a procedure where an electrical current produced by a radio wave heats up an area around the nerve destroying its ability to transmit pain signals to the brain. This procedure can offer patients six to 12 months of pain relief. Radiofrequency ablation, along with other pain management injections has enhanced everyday life for Gerald.

Gerald has found that the staff at the Seacoast Interventional Pain Clinic, located only 10 miles away from his home, responds to his needs consistently with quality service at every visit. "What I enjoy about Dr. Perry and the staff is while they are very professional, they also treat me like I am a part of their family. Dr. Perry takes his time with me and explains everything thoroughly," Gerald added.

The staff feels the same way about Gerald. Sonya Zeigler, a board certified nurse practitioner, who performs each patient's initial consultation, enjoys caring for patients like Gerald. "It is nice to know that I am a part of improving a patient's quality of life," said Sonya. "We love to see Gerald who occasionally stops by even when he doesn't have an appointment, just to say hello or bring us treats. His warm heart and enthusiasm for life is infectious."

Alan Gore of Tabor City, North Carolina, has also experienced a

changed outlook on life since he began receiving care from the staff of Seacoast Interventional Pain Clinic. On Christmas Eve of 2001, Alan was severely hurt in an automobile accident and hospitalized for 87 days, admitted for injuries to his hip and knee. A talented vocalist and pianist at Olyphic Baptist Church, Alan was determined to get better so he could continue sharing his gift of music with others.

After recovering from the accident, Alan returned to his music ministry but continued to suffer with chronic pain. More than ten years later, he came to Dr. Johnson for relief.

Dr. Johnson treated Alan with an interventional pain option called a sacroiliac joint injection. The Sacroiliac joints connect the pelvic bones to the spine. When one of these joints is injured, it results in chronic pain. The injection of a long lasting steroid into the

sacroiliac joint reduces inflammation and pain for an extended period of time.

Dr. Johnson has also administered trigger point injections to relieve the pain around Alan's knee and leg. Trigger points are painful knots of muscles formed when the muscles are in spasm.

An injection of steroid into this area can alleviate pain and inflammation commonly associated with trigger points.

"Dr. Johnson is very knowledgeable on the most advanced interventional procedures available. He takes his time and explains every step to you so that you feel comfortable," said Alan.

"Treatments performed by Dr. Johnson allow me to go on outings that I otherwise would not be able to participate in because of the pain. Going to church every Sunday morning and night, and enjoying time with my family is now possible because of the care I receive from the staff of the McLeod Seacoast Pain Clinic."

If you are interested in receiving care from Seacoast Interventional Pain Clinic located at McLeod Seacoast, please consult with your primary care physician for a referral. For more information, call (843) 390-8222.



Nurse Practitioner Sonya Zeigler consults with Alan Gore, a patient from Tabor City, North Carolina. Alan attributes his improved health to the physicians and staff at Seacoast Interventional Pain Clinic.

McLeod News

McLEOD MIRACLE CHILD FEATURED ON KELLOGG'S CEREAL BOXES

2012 McLeod Miracle Child Blakeney Moore of Florence has been selected to appear on specially-designed Children's Miracle Network Hospitals (CMNH) Kellogg's Frosted Flakes cereal boxes, to be sold exclusively in Food Lion stores. Blakeney is the first McLeod Miracle Child to be featured in a national CMNH campaign.

Blakeney is one of six children chosen by CMNH to be featured in the Kellogg's campaign starring children who have overcome adversity in CMNH partner hospitals, including McLeod Children's Hospital. In addition to a donation that will be made to McLeod Children's Hospital by Kellogg, the Children's Hospital will also receive a portion of the proceeds from the sale of Kellogg's Frosted Flakes.

Blakeney was a McLeod Children's Hospital Miracle Child in spring of 2012. At three years old, **Dr. Al Gilpin** of McLeod Orthopaedics diagnosed Blakeney with developmental dysplasia of the hips.



Blakeney Moore



"Typically, when we see dysplasia of the hip, it is only one hip and in an infant. Discovering this condition in both hips of an older child is very rare," explains Dr. Gilpin.

Blakeney underwent six surgeries and spent a total of eight months confined by a body cast, which encases the entire body from mid-chest to the feet. Following her surgeries, Blakeney also required extensive rehabilitation to relearn how to walk and function like she did prior to surgery.

Today, Blakeney is a vivacious eight-year-old. She continues to see Dr. Gilpin every year to evaluate the growth of her legs.

"We could not have made the journey without Dr. Gilpin and McLeod Children's Hospital. They have given our little girl the ability to live her life to the fullest," says Blakeney's mother, Liz Moore.

Food Lion customers can also purchase paper Miracle Balloons at the cash register during the month of June, with proceeds benefiting the Children's Miracle Network Hospital in their community. Food Lion has been a national corporate sponsor of Children's Miracle Network Hospitals since 1991 and has raised more than \$45 million for children's hospitals.

You can also donate to the McLeod Children's Hospital by calling (843) 777-2694 or visiting www.McLeodFoundation.org.

McLeod News

McLEOD HOSPICE PHYSICIANS RECEIVE BOARD CERTIFICATION

McLeod Hospice and Palliative Medicine is pleased to announce that three of its Associate Medical Directors have received board certification in Hospice and Palliative Medicine. **Dr. Marina Androssova, Dr. Edward Behling, and Dr. Paul DeMarco** join Medical Director **Dr. Mark Fox** and **Dr. Vipul Shah** in earning this specialized board certification.

Drs. Fox, Shah and Androssova care for McLeod Hospice patients and those receiving Palliative Medicine at McLeod Regional Medical Center. In addition to their work with McLeod Hospice, Dr. DeMarco is the Director of the Rural Community Program at

Francis Marion University, and Dr. Behling serves as the Chief Medical Officer for HopeHealth.

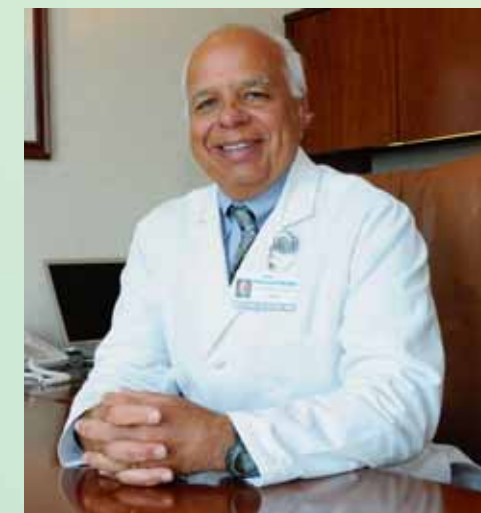
These physicians work with the McLeod Hospice and Palliative Medicine Teams to maximize quality of life while providing the medical expertise and oversight of the psychological, social and spiritual needs of both the patient and family.

This board certification creates a dialogue for improving how hospices, hospitals and nursing homes care for patients with chronic progressive illnesses as well as those near the end of life, according to the American Academy of Hospice and Palliative Medicine.



Front row, left to right: Dr. Marina Androssova, Dr. Mark Fox; Back row, left to right: Dr. Edward Behling, Dr. Paul DeMarco and Dr. Vipul Shah.

DR. MICHAEL ROSE RECOGNIZED FOR LEADERSHIP IN PATIENT SAFETY



Dr. Michael Rose, Vice President of Surgical Services for McLeod Health, has been named one of the "50 Experts Leading the Field of Patient Safety" by Becker's Hospital Review, a leading source for business and legal issues for health system leadership. The patient safety leaders who are recognized consist of advocates, professors, researchers,

administrators and healthcare providers who have won awards, published articles, spoken out and led initiatives to reduce harm and ensure safety.

These experts include individuals at national organizations, universities and healthcare organizations working to improve patient safety.

Dr. Rose is both a clinician and a healthcare executive. He provides direct patient care as a practicing anesthesiologist and serves as a member of the McLeod Health Board of Trustees. Dr. Rose also serves as chairman of the South Carolina Safe Surgery 2015 Leadership Team for the South Carolina Hospital Association.

Additionally, Dr. Rose serves as a technical expert for the initiative on improving the safety of ambulatory surgery in the United States, a joint effort of the Agency for Healthcare

Research and Quality of the U.S. Department of Health and Human Services and the American Hospital Association.

"Dr. Rose's leadership skills have been demonstrated repeatedly as the McLeod organization continues to evolve into one of the top performers in the United States for providing consistent quality healthcare," said Rob Colones, President of McLeod Health.

"It is through his leadership, insight and tireless efforts that our surgical teams are making changes that have a direct and crucial impact on the quality and safety of patient care at McLeod. His passion for safe surgery, eliminating risks, decreasing never events, and improving the care to the surgical patient is evident in his endeavors."

McLeod News

McLEOD PARTNERS WITH TECHNICAL COLLEGE TO BENEFIT PATIENTS



Adam Ploeg receives a massage during his cancer treatment by Central Carolina Massage Therapy student, Heather Welch.

The McLeod Cancer Center and Central Carolina Technical College recently collaborated on a joint project that is benefitting cancer patients. Certified Oncology Social Worker Raquel Serrano, with the McLeod Cancer Center, set out to pursue a massage therapy program that would provide cancer patients with additional comfort. “Massage is an evidence-based program in cancer care and research has shown the benefits to cancer patients,” explained Raquel. Massage therapy reduces pain, increases relaxation, decreases muscle tension and stimulates the lymphatic system. In the Fall of 2012, McLeod partnered

with the massage therapy program staff at Central Carolina Technical College in Sumter. This relationship not only helps cancer patients treated at McLeod, but also assists the massage therapy students in meeting their program requirements. The two organizations also learned from the South Carolina Board of Massage and Bodywork Therapy that they were the **first school and hospital** to offer clinical rotations for massage therapy students in South Carolina. The regulatory board complimented the two groups on being “pioneers in the industry” for the state and accomplishing a goal they have long sought after. Only three other states offer similar programs – Oregon, Minnesota and Washington. In January of 2013, twelve Central Carolina students began offering hand and arm massages once a week to cancer patients receiving chemotherapy infusion treatment at McLeod Regional Medical Center and in the office of McLeod Oncology and Hematology Associates. The purpose of the massage therapy internship is to enhance the treatment experience of the patients and meet the training and clinical requirements of the students. During their clinical rotations to the hospital, the student interns are directly supervised by an instructor. While they are massaging the patient’s hand and arm, the students also get to know the patients and explain how massage therapy can help them. Adam Ploeg recently received chemotherapy after his diagnosis with cancer. “The massage was certainly relaxing and it took my mind off of the

current treatment,” said Adam. “It also has physiologic benefits. But, more than that, the students who performed the massage really wanted to get to know you as a person – not just a cancer patient.” The Certificate in Health Science - Massage Therapy Program at Central Carolina is offered to prepare individuals for employment in hospitals, chiropractic clinics, spas and self-employment as licensed massage therapists. During the one year program, which consists of three semesters, the students must achieve 900 clinical hours. The volunteer hours at McLeod contribute to the clinical hours required to earn their license. “Students have really enjoyed it,” said Brent Jackson, Massage Therapy Academic Program Manager for Central Carolina. “The internship has made them understand the cancer patients’ experience more. I’ve seen growth in each of them this semester, both professionally and personally. It has really touched them. Many of them have said as long as they can, they will come to McLeod to work with patients.” The clinical rotations at McLeod are set up for the spring and summer semesters. Brent said he has some students who have said they want to volunteer and offer the program in the fall. “We are very grateful for the collaboration with Central Carolina,” explained Raquel. “They have been wonderful to work with and, while I know the patients are benefitting from the experience, I also see how it has positively affected the students.”

McLeod Welcomes These Physicians



Sophia Edwards-Bennett, M.D., Ph.D. Board Certified in Radiation Oncology
Dr. Edwards-Bennett received her medical degree from Weill Medical College of Cornell University in New York, New York. She completed a Radiation Oncology residency at Memorial Sloan Kettering Cancer Center in New York, New York. Dr. Edwards-Bennett cares for patients at Carolina Regional Cancer Center in Myrtle Beach.



Benjamin Elder, M.D. Board Certified in Pediatrics
Dr. Elder received his medical degree from the Medical University of South Carolina in Charleston, South Carolina. He completed a Pediatrics residency at the Medical Center of Central Georgia in Macon, Georgia. Dr. Elder joins the McLeod Family Medicine Residency Program in Florence, where he enhances pediatric education as a faculty member for the Residency Program.



Dominic Heffel, M.D. Board Certified in General Surgery
Dr. Heffel received his medical degree from the George Washington University in Washington, DC. He completed a General Surgery residency at UCLA Center for Health Sciences in Los Angeles, California. He also completed a Plastic and Reconstructive Surgery residency at the University of Miami/Jackson Memorial Hospital in Miami, Florida. Dr. Heffel completed a Microsurgery fellowship at Johns Hopkins Hospital in Baltimore, Maryland. Dr. Heffel cares for patients at McLeod Plastic and Reconstructive Surgery in Florence.



Kyaw Hein, M.D. Board Certified in Internal Medicine and Geriatrics
Dr. Hein received his medical degree from the Institute of Medicine in Yangon, Myanmar. He completed an Internal Medicine residency at New York Methodist Hospital in Brooklyn, New York, where he also completed a Geriatric Medicine fellowship. Dr. Hein cares for patients as a Hospitalist, or Inpatient Physician, at McLeod Loris and McLeod Seacoast.



Belal Khokhar, M.D. Board Certified in Internal Medicine
Dr. Khokhar received his medical degree from Saba University School of Medicine in the Netherlands. He completed an Internal Medicine residency at Carilion Clinic in Roanoke, Virginia. Dr. Khokhar cares for patients as a Hospitalist, or Inpatient Physician, at McLeod Loris and McLeod Seacoast.

McLeod Welcomes These Physicians



Rommel Lu, M.D. Board Certified in Blood Banking/Transfusion Medicine, Internal Medicine, and Hematology and Medical Oncology

Dr. Lu received his medical degree from the University of Santo Tomas in Manila, Philippines. He completed an Internal Medicine residency at St. Vincent Hospital in Worcester, Massachusetts. He also completed a Blood Banking and Transfusion Medicine fellowship at the University of Virginia in Charlottesville, Virginia, where he also completed a Hematology and Medical Oncology fellowship. Dr. Lu completed a NIH T-32 Hematology Research fellowship at the University of North Carolina Hemostasis and Thrombosis Center in Chapel Hill, North Carolina. Dr. Lu cares for patients at McLeod Oncology and Hematology Associates in Florence.



Ann Dargan-McDonald, M.D. Board Certified in Internal Medicine

Dr. Dargan-McDonald received her medical degree from the University of South Carolina School of Medicine in Columbia, South Carolina. She completed an Internal Medicine residency at the University of Utah Health Sciences Center in Salt Lake City, Utah. She also completed a Hematology and Oncology fellowship at Mayo Clinic in Jacksonville, Florida. Dr. Dargan-McDonald cares for patients as a Hospitalist, or Inpatient Physician, at McLeod Loris and McLeod Seacoast.



Scot Schultz, M.D. Board Certified in Thoracic Surgery

Dr. Schultz received his medical degree from the University of Miami School of Medicine in Miami, Florida. He completed a General Surgery residency at Georgetown University Hospital in Washington, D.C. He also completed a Cardiothoracic Surgery fellowship at Wake Forest University/Baptist Medical Center in Winston-Salem, North Carolina. Dr. Schultz cares for patients at McLeod Cardiothoracic Surgical Associates in Florence.



Ryan Williams, D.O. Family Medicine

Dr. Williams received his medical degree from Des Moines University in Des Moines, Iowa. He completed a Family Medicine residency at McLeod Regional Medical Center in Florence. Dr. Williams cares for patients at McLeod Urgent Care Centers in Darlington and Florence.

McLeod Loris Seacoast also welcomes board certified physicians

Timothy Carr, M.D., M.B.A.
Mark Carroll, M.D.
Christopher Ward, M.D.

to the McLeod Loris and McLeod Seacoast Emergency Departments.

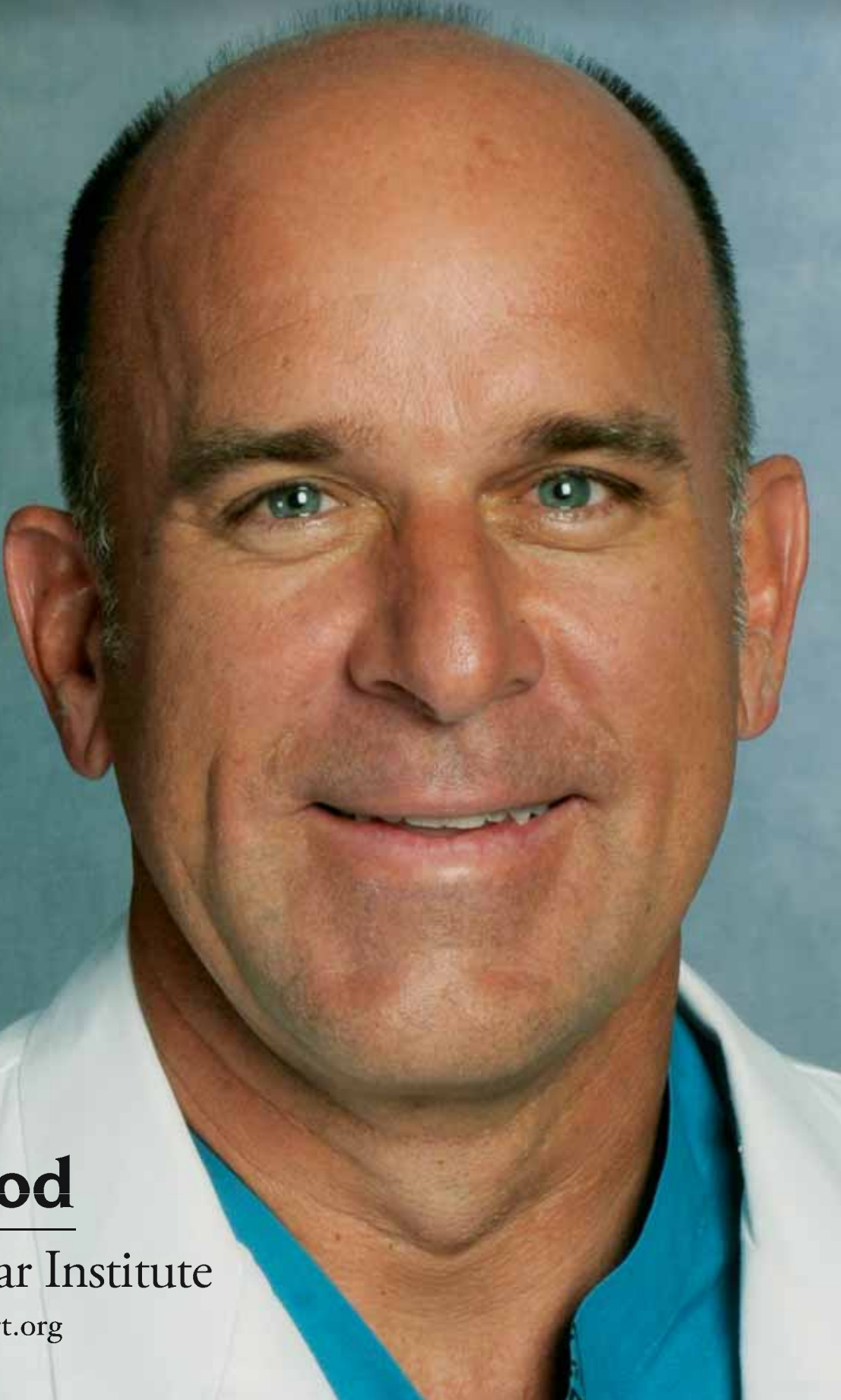
We're Honored to Welcome One of America's Best Heart Surgeons.

Dr. Schultz Joins Our Talented Heart Team.

The McLeod Heart and Vascular Institute is proud to have the best and brightest doctors. And Dr. Scot C. Schultz, board certified Cardiothoracic Surgeon and named one of the *Best Doctors in America* by Best Doctors, Inc., has all the qualities that make him an exceptional addition.

"McLeod impressed me in so many ways. First and foremost, their medical staff is extremely dedicated to the highest quality care. And, they utilize the best cutting-edge technology and techniques in their excellent heart and vascular program," says Dr. Schultz.

With additional honors, including being awarded the distinction as a *US News Top Doctor in Thoracic and Cardiac Surgery* by his peers and the *Compassionate Doctor* award by patients, you are in the most capable and expert surgical hands at McLeod Health.



McLeod
Heart & Vascular Institute
McLeodHeart.org

McLeod Health

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