

Memorial Hermann Red Duke Trauma Institute

Orthopedic Trauma Report 2016

Red Duke
Trauma Institute

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"A team is many hands with one mind." – Unknown



Dear colleagues and friends,
One hundred percent of our patients never expected to see a doctor the day they were injured and transported to the Memorial Hermann Red Duke Trauma Institute, one of the busiest Level I centers in the nation. Our patients were on their way to work, heading home, rushing to an appointment or going to visit friends.

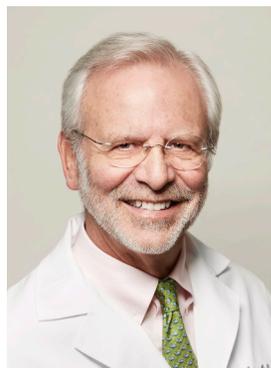
Our Orthopedic Trauma Team puts their emergent needs ahead of everything, coming in at night, on weekends, around the clock, every day of the year. In 2016, more than 3,200 such patients were treated by orthopedic traumatologists at Memorial Hermann-Texas Medical Center. A quarter of them had Injury Severity Scores of 17, indicating extremely severe multiple injuries. Airbags and seatbelts, designed for protection, have resulted in more survivors with a much higher level of overall bodily injury. Because arms and legs remain relatively unprotected, injuries to these extremities are more severe than in years past.

Our approach to their care is multidisciplinary, with coordination among specialists in spine, pediatrics, hand surgery, plastic surgery, physical therapy and rehabilitation, limb loss and prosthetics. The same Orthopedic Trauma Team leads the effort in developing new approaches to fragility fractures, an increasing burden on our growing population of elderly citizens. Although an orthopedic traumatologist may not be the doctor of record for these patients, more than 80 percent of trauma patients have musculoskeletal injuries. The surgeons who provide care for them are fellowship trained in orthopedic trauma and several have completed second fellowships in spine, upper extremity or hand trauma. That means every orthopedic traumatologist who touches a patient at the Institute has spent at least one extra year in postgraduate training, totaling six or seven years of training following medical school. This level of care exists at fewer than three centers in the United States.

Research conducted and published by our faculty at McGovern Medical School at The University of Texas Health Science Center at Houston (UTHealth) ranks among the most highly recognized outcomes data on trauma. Our more senior physicians are recognized internationally; our younger team members are actively involved in national and international trauma education. In addition to the privilege of providing the best care possible, we have the privilege of training the next generation of orthopedic traumatologists through our fellowship program, which is ranked in the top group of trauma fellowships in the country. The product of our dedicated clinical experience, educational mission and research productivity gives the citizens of Texas one of the best Orthopedic Trauma Divisions in the United States.

We owe a debt of gratitude to Dr. Walt Lowe, chair of the Department of Orthopedic Surgery at McGovern Medical School at UTHealth, who equipped us to do this. Thanks to his leadership and the partnership between Memorial Hermann and UTHealth, we have the means to recruit and retain the best and brightest physicians at the pinnacle of their careers. Working together, this partnership has built a program that serves the needs of the fourth most populous city in the country.

Our approach for each of our trauma patients is: first, save the life, then save the limb, then restore function. A success for our trauma team is a survivor. A success for an orthopedic traumatologist is a patient who, a year later, is back to doing what he or she loves – going to work or school, riding horses, hiking in the woods, trimming rosebushes or enjoying an active family life. It's the outcome of the orthopedic injury that determines future quality of life. Occasionally we emergently repair a crushed pelvis and save a life, but the essence of our profession is to return people back to health, work and community life.



A handwritten signature in black ink that reads "Andrew R. Burgess, MD". The signature is written in a cursive style.

Andrew Burgess, MD

**Chief of Orthopedic Trauma,
Memorial Hermann Red Duke
Trauma Institute**

**Professor and Vice Chair
of Orthopedic Surgery,
Department of Orthopedic Surgery,
McGovern Medical School at UTHealth**



About the Memorial Hermann Red Duke Trauma Institute

The Red Duke Trauma Institute is built on a foundation of a long-term collaboration between Memorial Hermann-Texas Medical Center and UTHealth.

Our patients benefit from access to first-class clinicians with extensive training and experience in the complete range of trauma care, who are also faculty at the medical school.

Designated a Level I Trauma Center for both adults and children in Houston and surrounding areas, as well as the only verified burn center in the city, the Institute brings together a world-class team of clinicians, researchers and educators armed with the latest in research and technology to deliver comprehensive, life-saving services to the residents of the Gulf Coast region.

The Orthopedic Trauma Service at the Red Duke Trauma Institute

Major trauma is defined as a 15 on the Injury Severity Score (ISS), an established medical measurement that correlates with mortality, morbidity and hospitalization time after trauma. About a quarter of the 3,200 patients who were seen in 2016 by the orthopedic traumatology team at the Memorial Hermann Red Duke Trauma Institute had ISS scores of 17, indicating severe polytrauma. More than three-quarters of them had musculoskeletal injuries that included fractures and dislocations as well as soft-tissue, tendon and nerve injuries.



The true story of the Orthopedic Trauma Service at Memorial Hermann-Texas Medical Center is told in the successes of our patients. We are especially grateful to former patients Dylan Pugh, Maria Sonnen, Brian Southwell, Jarrell Bryant, Anthony Vallone and Steven Fisher for sharing their stories of personal strength, courage and perseverance in our 2016 report.

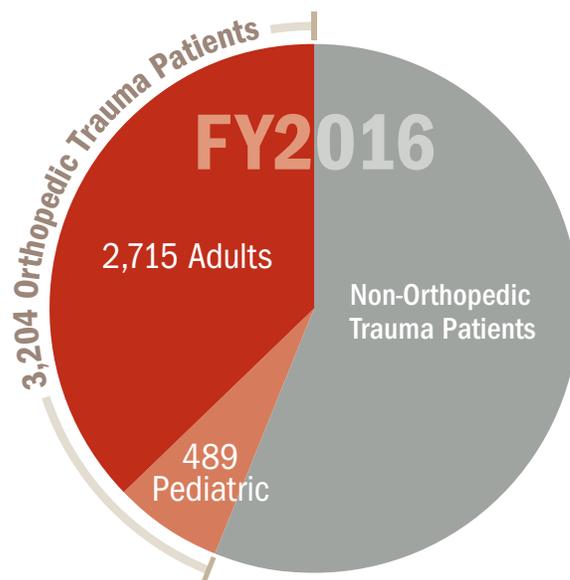
The Orthopedic Trauma Service serves the community 24 hours a day, 365 days a year, providing advanced treatment for serious musculoskeletal injuries of all kinds, including polytrauma. Physicians on staff at the Institute are affiliated with McGovern Medical School at UTHealth, which underscores their commitment to clinical care, research and education. They are dedicated to the highest standard of research and clinical excellence, and to the training of future orthopedic surgeons and orthopedic traumatologists. Their work and that of other physicians subspecialized in orthopedic trauma have led to dramatic advances in the treatment of serious musculoskeletal injuries of all kinds, and of severely injured patients.

Memorial Hermann-Texas Medical Center is the only hospital in the Greater Houston area that provides continuous call coverage by fellowship-trained orthopedic traumatologists. In conjunction with Memorial Hermann Life Flight®, the only hospital-based air ambulance service operating in Houston and surrounding communities, these affiliated subspecialists offer the highest level of orthopedic trauma care for fractures of the pelvis and acetabulum; periarticular fractures and dislocations; complications of fractures, including nonunions, malunions, infections, joint instability and arthritis; complex revision hip surgery and periacetabular osteotomies; complex wrist and elbow reconstruction; and nerve and soft-tissue injury.

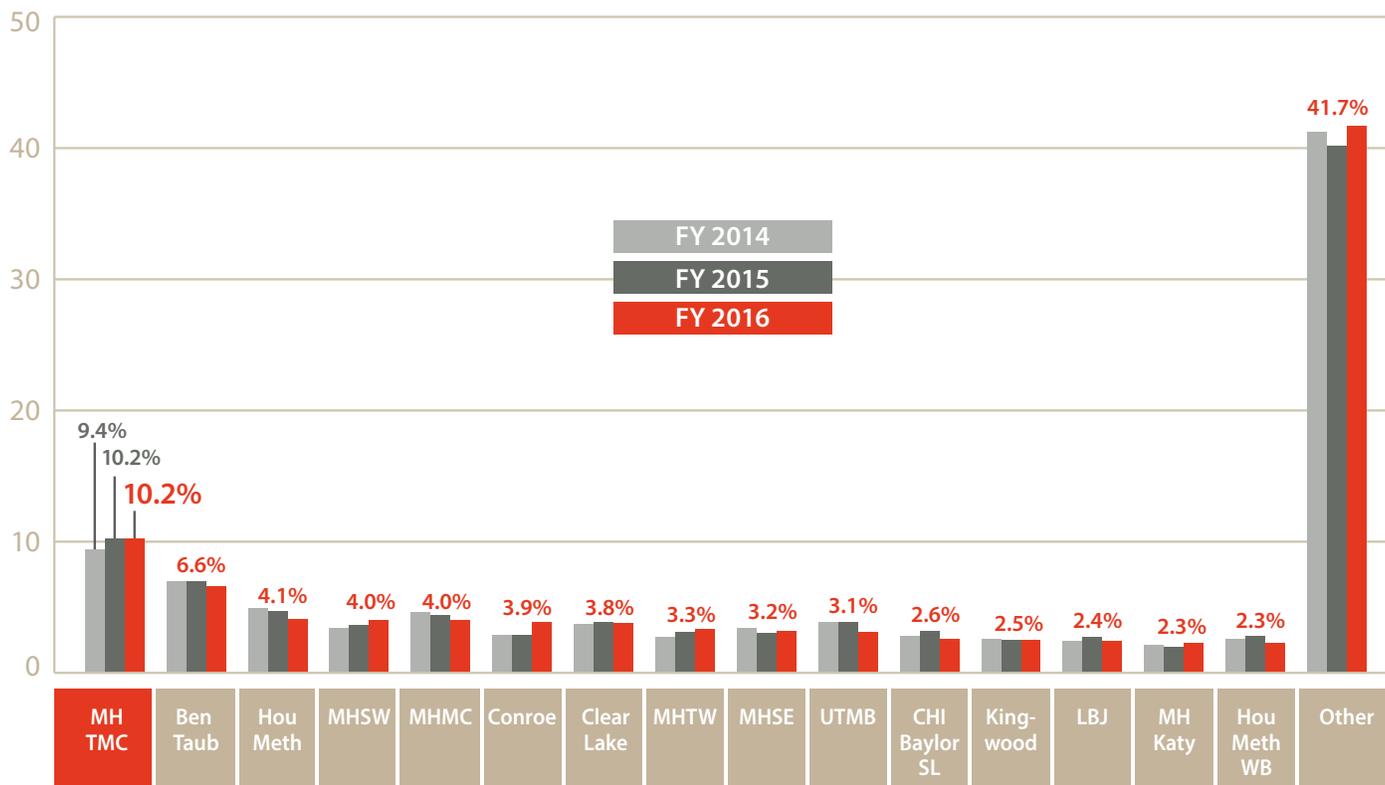
At a Glance



Mechanism of Trauma at the Red Duke Trauma Institute in FY16



Orthopedic Trauma Market Share





Silver Trauma Unit

One of the first of its kind in the nation, the 20-bed Silver Trauma Unit at the Red Duke Trauma Institute provides care for hospitalized older adult trauma patients. The unit's team of orthopedic traumatologists, nurses, case managers, social workers, therapists, chaplains, patient liaisons and volunteers emphasize patient and family participation in developing the plan of care.

The Silver Trauma Unit is designed to be a quiet, healing environment, with caregivers focused on fall prevention, delirium prevention, and early mobilization after injury and surgery. Because complications and co-morbidities in the elderly present themselves differently than in younger patients, nurses on the unit are experienced at assessing subtle changes in the patient's condition that may indicate a decline in status. The ability to recognize these changes early has been shown to improve patient outcomes.

Many of the nurses on the unit are trained through the Geriatric Resource Nurse (GRN) Program in affiliation with the McGovern Medical School at UTHealth. This model provides nurses with the skills and support necessary to deliver quality geriatric care. Continuing geriatric education, specialty services, interdisciplinary collaboration and nurse involvement in patient-centered treatment decision-making are the foundation of care provided on the Silver Trauma Unit.



Fragility Fracture Program

Patients treated through the Fragility Fracture Program have suffered low-energy, standing-height falls and are primarily cared for in the Silver Trauma Unit. A collaboration between Memorial Hermann-Texas Medical Center and the Department of Orthopedic Surgery at McGovern Medical School at UTHealth, this unique program grew from the Orthopedic Trauma Services' desire to ensure that fragility fractures in the elderly are managed by a standardized, effective and efficient care plan.

The Fragility Fracture team includes orthopedic traumatologists, hospitalists, emergency medicine physicians, anesthesiologists, nurses, physical and occupational therapists, case managers, a trauma program performance improvement manager and a physician assistant program coordinator. Their goal is to ensure the optimal continuum of care.

Interdisciplinary rounds ensure that the care is coordinated and evidence-based, and meets national quality metrics. During the hospital stay, caregivers focus on delirium management, alternative methods of pain management and other issues that affect elderly patients. As part of the program of care, they assess fall risk and evaluate patients' calcium and vitamin D levels to assess bone health. The program provides education about osteoporosis, other causes of fragility fractures and falls prevention, and starts patients on bone health supplements when needed. The team ensures that patients are discharged in a timely manner to rehabilitation programs, skilled nursing facilities or, ideally, to home with home health services. The level of compassion is very high among caregivers for patients with fragility fractures.



Before discharge, an appointment is scheduled for each patient in the Department of Orthopedic Surgery's Bone Health Clinic for a comprehensive evaluation that includes further assessment of bone health through laboratory studies and a bone-density scan, as well as assessment and counseling on fall risk. They may also be prescribed medication for the prevention and treatment of osteoporosis as appropriate.

The aim of the Fragility Fracture Program is to improve the patient's bone health and decrease fall risk to prevent future fractures, which can lead to reduced quality of life. This focused delivery of care through the fragility fracture program and the Silver Trauma Unit has led to improved outcomes for this special group of patients.

Education for Emergency Medical Services Teams

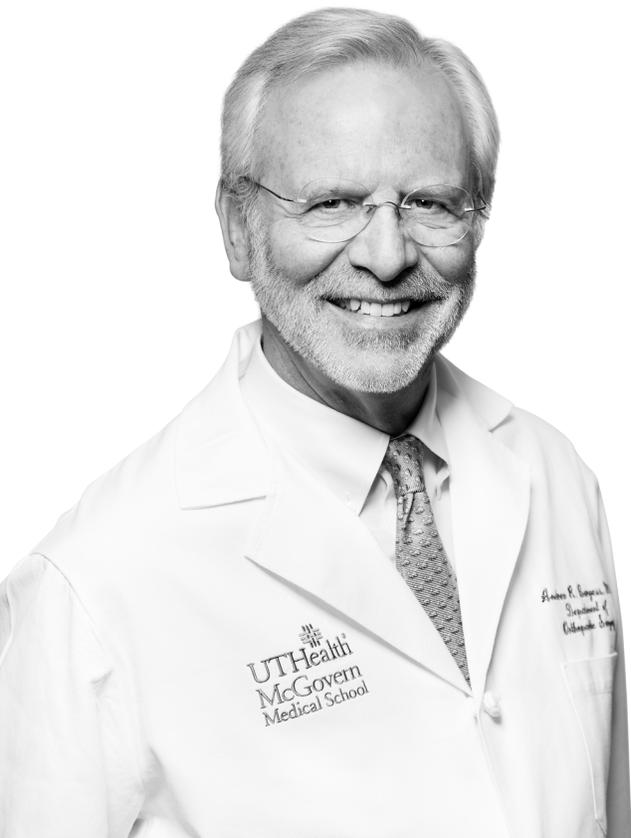
As the initial providers of care for acutely injured orthopedic trauma patients, Emergency Medical Services teams in Houston and surrounding communities play a critical role in saving lives and reducing the long-term impact of injuries. The Red Duke Trauma Institute's eight subspecialized orthopedic trauma surgeons view local and regional EMS teams as their partners in the field. As part of the McGovern Medical School Department of Orthopedic Surgery's mission of providing high-quality, evidence-based patient care, they offer advanced education on all topics related to orthopedic surgery and musculoskeletal trauma.



The EMS Education Program operates in partnership with Memorial Hermann Life Flight®, which is licensed by the Texas Department of Health to provide continuing education (CE) credits for EMS and through the Texas Nurses Association to provide CEUs for nurses. The program's objectives are to improve patient care by ensuring that providers in the field are skilled in the early identification and management of orthopedic injuries, many of which are subtle; to keep them up to date on current evidence-based treatment modalities; to build EMS teams' knowledge of how to triage patients to the appropriate level trauma center; and to improve the dialogue between orthopedic traumatologists at Memorial Hermann-Texas Medical Center and EMS services throughout the region.

Education is provided through on-site sessions at local and regional EMS services, annual EMS meetings and an annual EMS Orthopedic Trauma Symposium held at Memorial Hermann-TMC. This daylong multidisciplinary conference focuses on all aspects of musculoskeletal injuries. Participants attend dynamic, case-based didactic lectures and hands-on labs, listen to survivors tell their stories, and meet the team on a tour of Memorial Hermann Life Flight®. Case studies allow EMS to apply their experiences to improve their knowledge foundation.

Dedicated Traumatologists



Andrew Burgess, MD

Professor, Vice Chairman, and Chief, Orthopedic Trauma Service, McGovern Medical School at UTHealth

Medical School: Albany Medical College

Residency: Albany Medical Center

Fellowships: Orthopedic Traumatology, R. Adams Cowley Shock Trauma Center, Maryland Institute for Emergency Medical Services System

Areas of Interest: Trauma system design, vehicular crash research, acute management of high-energy musculoskeletal injuries.

Timothy Achor, MD

Associate Professor, Director, Orthopedic Trauma Fellowship, McGovern Medical School at UTHealth

Medical School: Medical College of Ohio

Residency: New York Medical College

Fellowships: Orthopedic Traumatology, Hospital for Special Surgery

Areas of Interest: Complex musculoskeletal injury, high-energy fractures and dislocations, complications from fractures including malunions and non-unions, and fractures of the pelvis and acetabulum.





Andrew M. Choo, MD

Assistant Professor, McGovern Medical School at UTHealth

Medical School: Baylor College of Medicine

Residency: Seton Hall School of Health and Medical Sciences

Fellowships: Orthopedic Traumatology, McGovern Medical School at UTHealth, Shoulder and Elbow Surgery, Thomas Jefferson University

Areas of Interest: Management of all fractures, both acute and chronic, as well as shoulder and elbow injuries, including fractures and dislocations, arthritis, and tendon and ligament tears.

Joshua Gary, MD

Associate Professor, McGovern Medical School at UTHealth

Medical School: University of Texas Southwestern Medical School

Residency: University of Texas Southwestern Medical School

Fellowships: Orthopedic Trauma, University of Maryland R. Adams Cowley Shock Trauma Center

Areas of Interest: Acute management of high-energy musculoskeletal injuries, the management of complications related to those injuries, additional expertise in the management of high-energy pelvic and acetabular fractures, design of trauma research.



Dedicated Traumatologists



William H. Harvin, MD

Assistant Professor, McGovern Medical School at UTHealth

Medical School: McGovern Medical School at UTHealth

Residency: McGovern Medical School at UTHealth

Fellowships: Orthopedic Trauma, University of Missouri

Areas of Interest: Acute management of high-energy musculoskeletal injuries, multiligamentous knee injury and knee preservation, including cartilage and meniscus transplantation.

James F. Kellam, MD

Professor and Assistant Program Director, McGovern Medical School at UTHealth

Medical School: University of Toronto

Residency: University of Toronto

Fellowships: Orthopedic Trauma, University of Toronto, Sunnybrook Health Science Center

Orthopedic Trauma, University of Washington, Harborview Medical Center

Sports Medicine, Slocum Center for Orthopedic and Sports Medicine

Fracture Research, AO Research Institute, Davos Switzerland

Areas of Interest: Basic science of fracture healing and clinical outcomes research, the design of musculoskeletal trauma systems and subsystems, including both high-energy and geriatric trauma care, and surgical education. He serves as a clinician at Harris County Healthcare System's Lyndon B. Johnson General Hospital.





Danielle Melton, MD

Associate Professor, McGovern Medical School at UTHealth; Director of the Amputee Program at TIRR Memorial Hermann

Medical School: Baylor College of Medicine

Residency: Baylor College of Medicine and McGovern Medical School at UTHealth Alliance

Areas of Interest: Rehabilitation of limb salvage and amputations with prosthesis, orthotics and bracing for neurologic and musculoskeletal injuries.

John W. Munz, MD

Associate Professor and Walter R. Lowe, MD, Professorship, McGovern Medical School at UTHealth

Medical School: McGovern Medical School at UTHealth

Residency: McGovern Medical School at UTHealth

Fellowships: University of Washington, Harborview Medical Center

Areas of Interest: Acute management of high-energy musculoskeletal injuries, periarticular fractures, periprosthetic fractures, and severe foot and ankle injury.



Dedicated Traumatologists



Mark L. Prasarn, MD

Associate Professor, McGovern Medical School at UTHealth

Medical School: New York University School of Medicine

Residency: University of Miami, Jackson Memorial Hospital

Fellowships: Orthopedic Traumatology, Hospital for Special Surgery Spine, University of Rochester Spine, MD Anderson Cancer Institute

Areas of Interest: High-energy musculoskeletal injuries of extremities and the spine. Dr. Prasarn is also the spine consultant for the Houston Texans and TIRR Memorial Hermann.

Milton L. "Chip" Routt, Jr., MD

Professor and Dr. Andrew R. Burgess Endowed Chair, McGovern Medical School at UTHealth

Medical School: The University of Texas Medical Branch

Residency: Vanderbilt University Medical Center

Fellowships: Orthopedic Surgical Trauma, University of Washington, Harborview Medical Center

Areas of Interest: Orthopedic trauma, fractures, and dislocations; the management of acute and chronic pelvic, acetabular, and hip injuries; orthopedic education.





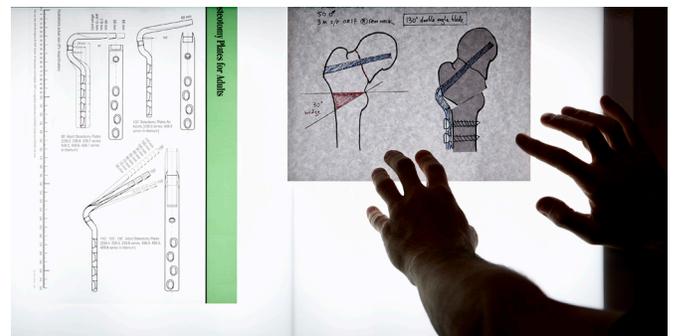
Fellowship Training in Orthopedic Traumatology

Our orthopedic traumatology fellowship program is ranked in the top grouping of trauma fellowships in the country. While orthopedic surgery residency training and board certification offer a general level of knowledge about the evaluation and treatment of skeletal trauma, they do not provide the orthopedic generalist with all the skills required for the care of seriously injured patients.

Fellowship training in orthopedic traumatology prepares orthopedic surgeons for careers focused on the definitive care of serious injuries. In addition to acute musculoskeletal injuries, affiliated fellowship-trained orthopedic traumatologists treat the complications of these injuries as well as complications that can arise from their treatment. This includes fractures that do not heal or that heal in the incorrect position, infections, stiffness and instability.

The Red Duke Trauma Institute at Memorial Hermann-Texas Medical Center is the primary site for the McGovern Medical School orthopedic trauma fellowship. The multidisciplinary team of orthopedic trauma surgeons affiliated with the hospital is supported by physician assistants, residents and fellows.

As our fellows discover, orthopedic traumatologists develop meaningful and rewarding relationships with patients as they help manage their return to an active life over months and sometimes years.



Memorial Hermann - Texas Medical Center



Patient Stories





In the Best Hands

Dylan Pugh remembers working that day, coming home and going out again to meet friends. On the drive home later that night, he swerved to avoid an oncoming car and his one-ton Chevy Silverado Duramax left the road, hit a ditch, went airborne and slammed into a tree. The crash occurred on Sept. 29, 2016, on a farm-to-market road in Huntsville, Texas, where the 21-year-old had just started his senior year at Sam Houston State University (SHSU). His friends were behind him in another vehicle; they called 911 and their parents.

Pugh's mother, Angela McBee, got the call at her home in Madisonville, a two-and-a-half-hour drive from Houston, where her son was transported by Memorial Hermann Life Flight®. She alerted her ex-husband, Dennis Pugh, and the two arrived at the Red Duke Trauma Institute at about the same time.

“He kept hitting milestone after milestone in his recovery and surpassed everyone’s expectations,” says **Dylan Pugh’s mother, Angela.**

She remembers the drive as “long and pretty tough. When we got there, they took us back to see Dylan. He was unconscious, intubated and on a ventilator,” she says. “We go in and see our baby lying there on the table for a CT scan. Seeing that was nothing I’d wish on anyone, ever. At the same time we knew he was right where he needed to be. Things went like clockwork, and the staff was incredible. They told us about the surgery Dylan would have and that Dr. Chip Roult would be doing it. One doctor said, ‘If this happened to me, he’s the man I’d want to have do the surgery.’ So I Googled him, and knew right away that Dylan was in the best hands.”

Milton “Chip” Roult, MD, is a professor in the Department of Orthopedic Surgery at McGovern Medical School at UTHealth. His areas of expertise include traumatic pelvic ring disruptions and acetabular fractures. He is internationally recognized for pioneering safe percutaneous pelvic fixation techniques, improving surgical care for complex acetabular fractures and advancing surgical safety.

“Dylan had a severe traumatic pelvic ring injury with fractures in both hip sockets and his right sacrum,” Dr. Roult says. “The sacral fracture extended into the joint where the sacrum articulates with the lower lumbar spine. This was a significant injury.”

To repair it, he made small incisions and placed strong screws to stabilize the fractured areas while they healed. He describes it as “a minimally invasive, maximally beneficial surgery.”

After Pugh’s discharge from Memorial Hermann-TMC, he was transferred to TIRR Memorial Hermann-The Woodlands for a three-week inpatient stay. He was released at the end of October and started in the hospital’s outpatient Challenge Program two days later. The program helps traumatic brain injury survivors maximize their potential by addressing the physical abilities, memory strategies, interpersonal communication and problem-solving skills they need for long-term success.

At the time of the accident, Pugh was three weeks into the fall semester of his senior year. An accomplished team roper who won “a good bit of money” through the U.S. Team Roping Championship, he entered SHSU in 2014 on a rodeo scholarship. He’ll graduate with a major in agricultural business and a minor in agricultural engineering in December 2017. His recovery complete, he’s also back to riding and roping.

“Dylan has made an excellent and remarkable recovery,” Dr. Roult says. “He had a very severe set of injuries and a challenging hill to climb in order to recover. He’s a strong-willed and physically strong young man, and those qualities have helped him a lot. He also has an extremely supportive family that was fantastic to work with. They asked all the right questions and were on board with the plan.”

“At the beginning, the trauma team told us that Dylan’s injuries were serious and cautioned us against letting our hopes get too high,” McBee says. “But he kept hitting milestone after milestone in his recovery and surpassed everyone’s expectations. It’s all due to the grace of God, the skill of the surgeons and the incredible care he received. And he’s also pretty tough.”



Saving Maria Sonnen's Leg

It's been more than a year since Maria Sonnen and her daughter, Laura Sonnen, were hit from behind repeatedly by a man driving a Nissan Frontier pickup truck. The upshot of the assault was a severe injury to her left leg and near complete loss of the skin from behind her right knee to her ankle circumferentially, putting her at risk for an above-the-knee amputation. At many Level I trauma centers, the outcome would have been loss of her leg. Instead, she's back to the life she loves.

Toward the end of January 2016, Sonnen and her daughter were in late rush-hour traffic in Houston. "We were stopped on the feeder because of construction at an exit," she recalls. "Laura was driving. She looked in the rearview mirror and told me to hold on, that we were going to be hit from behind by a car that was coming up fast. When he hit us a second time, my daughter, who is a medical assistant, got out to make sure he was okay. We thought he might be having a heart attack or stroke. Then I got out to check on Laura."

"When I woke up, I was laying on the ground on my back," Maria Sonnen recalls. "I felt a terrible burning sensation on my right leg."

Sonnen was standing next to the car with the passenger door open when the driver rammed her car again, knocking her down. "I was unconscious for a short time," she recalls. "When I woke up, I was laying on the ground on my back and felt a terrible burning sensation on my right leg. I was screaming, 'What have you done to my leg?' Then EMS arrived."

At the Memorial Hermann Red Duke Trauma Institute, she was rushed to a trauma bay by a team that included orthopedic traumatologist Joshua Gary, MD, an associate professor in the Department of Orthopedic Surgery at McGovern Medical School at UTHealth, and plastic and reconstructive surgeon Emmanuel Melissinos, MD.

"Both of Maria's legs had severe injuries," Dr. Gary says. "The right leg was degloved almost 360 degrees, with skin missing from above the knee to the mid-portion of the shin. When

you've lost that much skin, you're staring at an amputation. We told her family we had to see what Dr. Melissinos could do."

In addition to the large area of lost flesh on the right leg, she had an open fracture, had lost an artery and had extensive nerve damage. "Dr. Gary stabilized the fracture, and we did a number of irrigations and debridements to gradually remove necrotic tissue to get to a situation we could control," Dr. Melissinos says. "When we start on wounds like this, we don't know if we'll be able to go to reconstruction, especially if the flesh keeps dying. So we do it slowly in stages. With Maria, it was not easy to determine whether her leg was salvageable, which underscores the importance of being treated at a trauma center where physicians know how to do these procedures."

When he found that the wound was reconstructable, the plastic surgery team proceeded with a modified radial forearm free flap and split-thickness skin grafts using adjacent skin. While the standard radial free flap carries with it significant morbidity and leaves a large secondary defect, a modified version developed by Dr. Melissinos involves taking a very small strip of skin with a larger amount of flesh around it, which leaves a line scar on the forearm.

Sonnen's left leg had a smaller area of necrosis and a fracture with no exposed bone. "Because there was skin and flesh around it, the reconstruction was much simpler," Dr. Melissinos says. "We debrided the wound until it was clean and found healthy tissue underneath. We partially closed it by advancing the adjacent tissues and then did a split-thickness skin graft."

Sonnen was hospitalized for three months, then spent two and a half months in a skilled nursing facility before she was discharged to home. Her daughter stayed by her side.

"Dr. Melissinos is a miracle worker," Dr. Gary says. "He does things other plastic and reconstructive surgeons can't do, and the work he did on Maria gave her a functional leg. He's one of a kind and a big reason why our center does fewer amputations than other Level I trauma centers. He's been dedicated to his practice for 30 years now, and he really, really makes a difference in what we can do to restore function. Maria was 74 at the time of her accident. With an amputation at that age, she would likely be in a wheelchair and never walk again. On the night she came in, I would never have predicted that her outcome would be as good as it is. Dr. Melissinos made the difference."

-Continued on page 35.



A Walking Miracle

After working his usual night shift on a Tuesday, and then the day shift the following Thursday, Brian Southwell was lying in bed in the wee hours of the morning unable to sleep. “It was a few days before Christmas, and I was going to have my daughter for the weekend,” he recalls. “I thought, instead of taking a four-year-old shopping at Walmart right before Christmas, I’d just get up and go now because I couldn’t sleep anyway.”

It was 4:30 a.m. when the 45-year-old left his home in Onalaska, Texas, to make the 14-mile drive to Livingston. Along the way, he fell asleep at the wheel of his mid-size Chrysler sedan. He doesn’t remember the accident but has sharp recall of everything that happened immediately afterward.

“I called 911, and they got my location from the GPS on my phone,” he says. “I could hear cars behind me on the road, but they couldn’t see me because I was hidden in the trees. I tried to get to my flashlight out of the trunk but I was too injured to move. Then I remembered the flashlight on my cell phone and stood it up on the dash against the windshield. That’s how the EMTs found me.”

“I tried to get to my flashlight out of the trunk but I was too injured to move,” **Brian Southwell** recalls.

Southwell was taken to the community hospital in Livingston with a broken rib, several fractured ribs, a fractured sternum and intestines ruptured by the seatbelt. The impact also severely shattered his right ankle. As soon as they rolled him through the door of the emergency center, he was told he would be transported to Houston.

Fog had grounded Memorial Hermann Life Flight®, and he was taken by ambulance to the Memorial Hermann Red Duke Trauma Institute in the Texas Medical Center, a 77-mile trip. On arrival, the top-notch multidisciplinary trauma team went to work to save his life.

Southwell underwent multiple surgeries to repair his ruptured intestines, including a temporary ostomy that was later reversed, a series of abdominal skin grafts and reconstruction

of his abdominal wall. Fellowship-trained orthopedic traumatologist John Munz, MD, an assistant professor of orthopedic surgery at McGovern Medical School at UTHealth, was called in to repair Southwell’s shattered ankle.

“Brian had a dislocation, a talar neck and head fracture, and a navicular fracture – a significant ankle injury,” Dr. Munz says. “Because of his bowel and colon injury, he had been hospitalized for nearly three weeks before I could repair his ankle. It was a complex reconstruction, with plates on both sides held in place by seven screws and two pins. It went well.”

It took Southwell six months to recover from his ankle injury. After the surgery, he was non-weight bearing for five months. He went through rehabilitation with a home health coach, with physical therapy and protected weight bearing with a boot in the fifth month, then heavier weight bearing without a boot at month six.

“Brian is a very motivated and determined guy,” Dr. Munz says. “He kept his sense of humor through it all and always had a good attitude. He completely bought into his treatment plan and was very committed to walking again. Because of how severe the injury was, I initially thought we’d have to do further reconstruction to give him a durable ankle. But we didn’t, thanks to his drive to get better.”

Southwell remembers his worst moments: dealing with the physical limitations and psychological effect of using the walker. “I was 45 years old, in perfect health and very active,” he says. “I was alone at home and found it difficult even to make lunch for myself. I appreciate everything Dr. Munz did to help me walk again.”

For a high-functioning individual like Southwell, a shattered ankle is a potentially life-changing injury. Dr. Munz follows patients periodically for two years after an accident, then every year moving forward in annual surveillance.

“With this type of injury to the ankle, patients can develop problems down the road,” he says. “I like to keep them in the system and let them know that I care about them. Brian had many other serious injuries, but foot and ankle injuries drive long-term outcomes because the quality of care patients receive and how well they heal determines whether they’ll walk again. Orthopedic injuries have the potential to be the most debilitating. To take a guy in the prime of life with an injury that could cause a lifetime of pain and disability, and put him together so he can return to normal life, is a huge thing for him and for society. For a surgeon, it’s incredibly rewarding.”

– Continued on page 36.



Always Moving Forward

“There have been days when I didn’t feel like I would make it through,” says Jarrell Bryant, a former patient at Memorial Hermann-Texas Medical Center who was admitted through the hospital’s Red Duke Trauma Institute. “I went through the ‘why me’s,’ but I got past it. My wife and I have an eight-year-old daughter I have to set an example for. If someone tells her she can’t do something, I want her to be able to say that her dad lost a leg and kept on going. Then no one will be able to keep her from accomplishing her goals.”

In late September 2016, Jarrell Bryant and his motorcycle buddies were heading home in the wee hours of the morning. “Five of us were riding together, and we slowed down as we approached a sharp curve,” he says. “The guy riding next to me caught his back wheel on the curb. He bounced off the curb and T-boned me at the back of my motorcycle.”

The impact sent Bryant into the air, and on his way down he slammed his left leg into a street sign, breaking it and separating his pelvis from his sacrum. After initial treatment at a community hospital, he was transferred to the Memorial Hermann Red Duke Trauma Institute.

“There have been days when I didn’t feel like I would make it through,” says **Jarrell Bryant**.

The first doctor he remembers seeing was Andrew Choo, MD, who is dual fellowship trained in orthopedic traumatology and shoulder and elbow surgery. “Dr. Choo and I talked. My wife and I had already come to terms with the fact that, given the damage to my leg, I might lose it,” Bryant says. “Instead, he was optimistic and said ‘Let’s see what we can do.’”

While Dr. Choo was cleaning Bryant’s leg and removing necrotic tissue in the OR, his partner Milton “Chip” Routt, MD, a professor in the Department of Orthopedic Surgery at McGovern Medical School at UTHealth, stabilized Bryant’s pelvis with a malleable trans-symphyseal plate and screws in the front and strong, large-diameter screws in the back.

“We routinely repair this type of injury,” says Dr. Routt, whose areas of expertise include traumatic pelvic ring disruptions and acetabular fractures. He is internationally recognized for pioneering safe percutaneous pelvic fixation techniques, improving surgical care for complex acetabular fractures and advancing surgical safety.

“Jarrell had open, contaminated fractures of his tibia and fibula,” says Dr. Choo, a clinical assistant professor in the Department of Orthopedic Surgery. “We worked hard to save the leg but found a lot of contamination in the wound, as well as missing muscle, muscle damage and nerve damage. We had a long talk with him about options, including limb salvage. Did he want a full-court press to save his leg versus amputation? He said he wanted to get back to work as soon as possible and felt that a prosthesis would allow him to do that.”

Dr. Choo’s goal was to save as much of Bryant’s leg as possible and perform a below-the-knee amputation for a better functional outcome. “With a well-fitted prosthesis, these patients can do almost anything, from running to rock climbing,” he says. “Dr. Melissinos was able to rotate the muscle and cover the wound with a skin graft from the upper left thigh to allow for the below-the-knee amputation.”

Emmanuel Melissinos, MD, a reconstructive plastic surgeon who specializes in trauma, has practiced at Memorial Hermann-Texas Medical Center for more than 25 years and is respected by his colleagues as an exceptionally talented surgeon. During the 16 days Bryant was hospitalized, he also saw physiatrist and amputee specialist Danielle Melton, MD, director of the Limb-loss and Orthotics and Prosthetics Program at TIRR Memorial Hermann.

“Dr. Melton is fantastic,” Bryant says. “My wife and I met with a prosthetist on our first post-hospital visit to her office. We started the initial fitting in mid-December 2016, a process that took less than a month, and went over exercises to build my core strength to make walking easier. I got my new leg on Jan. 10 and started physical therapy the following week in Dr. Melton’s clinic.”

The orthopedic trauma team involves Dr. Melton early on when considering an amputation. “She lets patients know what to expect and helps prepare them psychologically for the next steps,” Dr. Choo says. “Jarrell had a fantastic attitude. Because of his military service, he knew people who had had an amputation. He was motivated, informed and well prepared.”

– Continued on page 36.

A portrait of a man with short brown hair and a slight smile, wearing a grey houndstooth suit jacket, a light blue dress shirt, and a red tie with white polka dots. An orange pocket square is visible in his jacket. The background is dark and moody.

Without Stopping

After a devastating automobile accident that nearly took his life, Anthony Vallone is back at work at Shell Trading with barely a limp, thanks to his strength of character, a supportive family and the orthopedic trauma team at the Memorial Hermann Red Duke Trauma Institute. “I have nothing but the utmost respect for all of my doctors and therapists,” he says. “Without them, I wouldn’t be where I am today.”

In September 2015, Vallone got an early start on the drive south on IH-45 from Dallas to his home in Houston. Around 5:30 a.m. his car was hit head on by a vehicle that entered the interstate from an exit ramp, going the wrong way. “The last thing on your mind when you’ve driven a route 100 times is that someone will be driving the wrong way on the freeway,” he says. “I was going 75 and they clocked her at 80, so we hit at a force of 160 miles per hour.”

Vallone’s car flipped and he landed upside down, hanging by his seatbelt. When the airbag engaged, it knocked him out. Rescuers found him unconscious, with his knees at his shoulders and his head under the steering column. “That was a Monday. I woke up the following Saturday,” he says.

“I was going 75 and they clocked her at 80, so we hit at a force of 160 miles per hour,” says **Anthony Vallone**.

A passing motorist called 911. After being extricated from his car, Vallone was taken by air ambulance to a hospital in Waco, where trauma physicians attempted to stabilize him. In a brief moment of consciousness on the way to the OR, he gave a nurse his mother’s phone number.

Two days later, he was transported by Memorial Hermann Life Flight® to the Red Duke Trauma Institute at the request of his family, which has a long history of board participation and philanthropic involvement with Memorial Hermann. His orthopedic injuries were extensive and terrible: a severely shattered ankle, a broken pelvis and a collapsed spine with lumbopelvic dissociation.

In a daylong surgery, orthopedic traumatologists Milton “Chip” Rutt, MD, and Shah Dodwad, MD, repaired his pelvis and spine. “There are several ways to break the back of the pelvis where it meets the spine, and Anthony’s was as bad as it can get,” says Dr. Rutt, a professor in the Department of Orthopedic Surgery at McGovern Medical School at UTHealth. His areas of expertise include traumatic pelvic ring disruptions and acetabular fractures.

“We worked together as a team, Dr. Rutt and I, repairing both the spine and pelvis in one operation,” recalls Dr. Dodwad, an assistant professor of orthopedic surgery at the medical school and a specialist in complex spine surgery. “The injury crushed nerves in Anthony’s spine. We relieved the pressure on the nerves and stabilized his lumbar spine and pelvis with rods and screws to allow it to heal.”

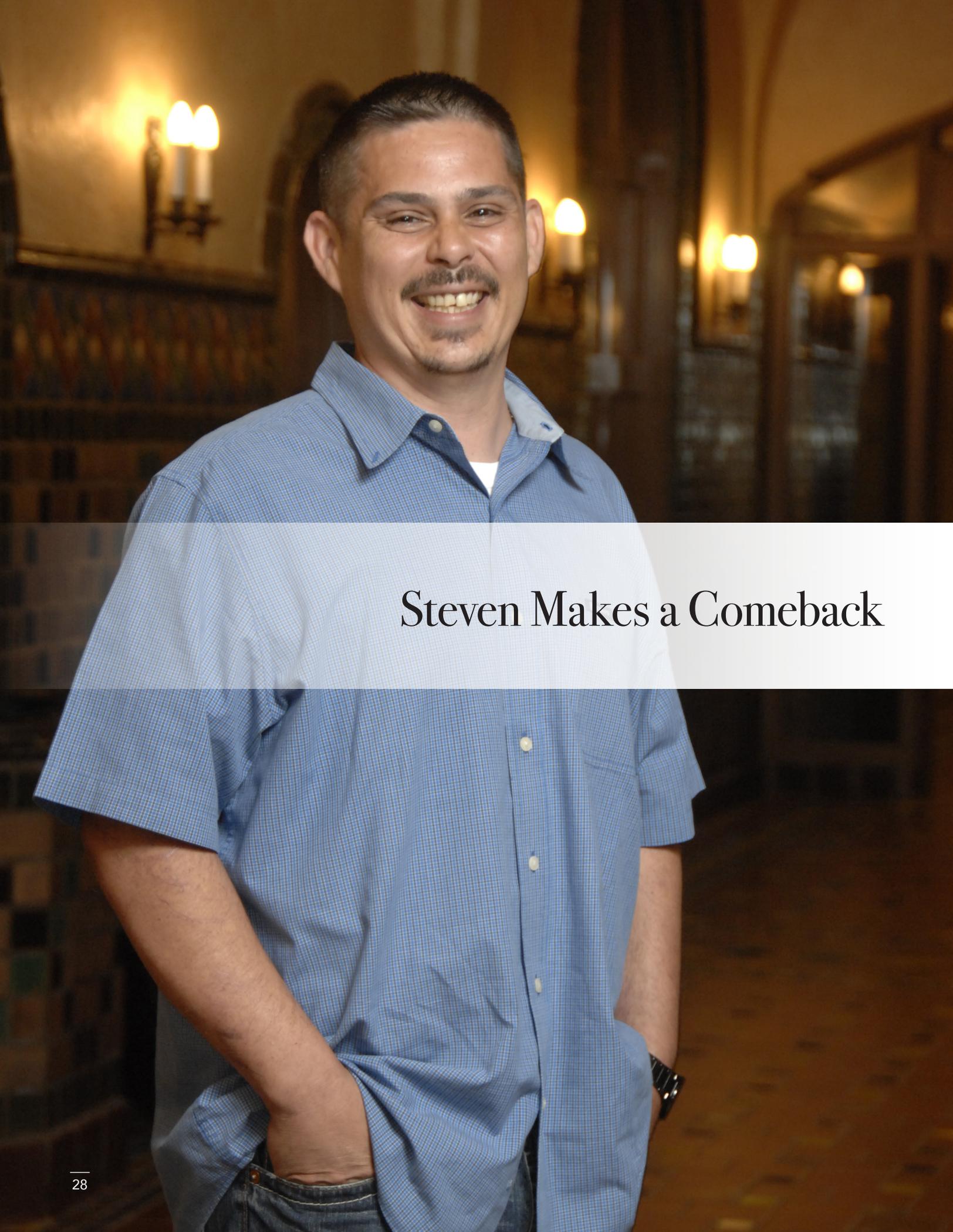
In a separate procedure, William McGarvey, MD, an associate professor of orthopedic surgery, repaired Vallone’s shattered ankle. “His ankle was fractured in multiple places – tibia, fibula and talus,” says Dr. McGarvey, who specializes in surgery of the foot and ankle. “We manipulated it into the proper position and stabilized it with an external fixation device to hold the ankle in position and allow the soft tissue to settle down.”

A week later, Dr. McGarvey and his team repaired the fractures in a complex surgery. “He had a lot of swelling, and we had to work through some fractures to get to others,” he says. “We limited the amount of incision to prevent further soft-tissue damage. In addition to many fracture lines, there was missing bone. Gradually we were able to piece it together in a way that gave him a good result.”

Vallone was hospitalized at Memorial Hermann-Texas Medical Center for three weeks. After a week as an inpatient at TIRR Memorial Hermann, he asked to be released to home. “We had a hospital bed brought in, and my family was there for me around the clock,” he says. “A physical therapist worked with me at home. Since I was non-weight bearing, there was very little I could do. I had the upper body strength to lift myself up, but my hips and legs took the brunt of the accident.”

It took Vallone a year to reach his goal of walking without a walker, cane or crutches. What kept him going was his family. “I have a huge family, and they pull together like no other. They truly dropped everything to take care of me. It was incredible and one of the most humbling experiences of my life. When you can’t do things for yourself and your life literally gets flipped upside down, you really learn what it means to care for somebody.”

– Continued on page 36.

A man with a mustache and goatee, wearing a blue checkered short-sleeved button-down shirt, is smiling and looking towards the camera. He has his hands in his pockets. The background is a dimly lit room with warm, yellowish light from wall sconces. A semi-transparent white banner is overlaid across the middle of the image.

Steven Makes a Comeback

Six months after sustaining multiple traumatic injuries in a motor vehicle crash, 38-year-old Steven Fisher was walking again, thanks to the skill of the multidisciplinary team at the Memorial Hermann Red Duke Trauma Institute and the handiwork of his orthopedic traumatologist Joshua Gary, MD.

Fisher was about two minutes from his home in Spring, Texas, when a Ford F250 pickup pulled out of a parking lot in front of his small car. He hit the truck head on and was partially ejected from the vehicle. His right foot, caught under the accelerator, held him in the car.

"I was lucky in one sense," he says. "An ambulance headed back to the station happened to roll up on the accident scene. They called Memorial Hermann Life Flight® on the spot. Later I heard that the EMTs who found me didn't expect me to make it."

"Later, I heard that the EMTs who found me didn't expect me to make it," says Steven Fisher.

Fisher was unconscious on arrival at the Red Duke Trauma Institute. He suffered a brain hemorrhage and severe orthopedic injuries that included a closed right femur fracture, a Grade IIIB open tibial fracture, a hip socket fracture, dislocation of the sacroiliac joint and an open right pantalar dislocation from which the entire talus bone protruded through the skin. During his month-long stay in the ICU at Memorial Hermann-Texas Medical Center, traumatologists performed more than 10 surgeries.

"Steven underwent a large staged orthopedic repair in coordination with plastic and reconstructive surgery and neurosurgery," says Dr. Gary, an associate professor in the Department of Orthopedic Surgery at McGovern Medical School at UTHealth. "A complex case like his requires the effort of our entire team. That access to subspecialty care and collaboration across all fields of care is what sets the Red Duke Trauma Institute apart from most Level II trauma centers. With each of our trauma patients we think first, save the life, then save the limb, then restore function."

The musculoskeletal component of Fisher's injuries alone was severe, with limb-threatening trauma. "At the beginning, we weren't sure if he would ever be able to walk again," says Dr. Gary, whose areas of clinical interest include pelvic and acetabular fractures, complex fractures and dislocations, and malunion and nonunion surgery. "Because he was too unstable to undergo definitive orthopedic surgery on arrival, we cleaned the open injuries and placed an external fixator for the tibial plateau fracture and repaired the pelvic and acetabular fractures through small incisions. This removed the urgency to treat his musculoskeletal injuries and allowed time for his other injuries, including his brain, to heal."

Plastic and reconstructive surgeon Emmanuel Melissinos, MD, was called in on the case to save Fisher's leg. "We had two areas of concern," Dr. Melissinos says. "On his upper leg close to the knee, flesh was missing. We had to move muscle around and graft skin to cover it. He also had a terrible ankle injury – a large area with exposed fractures and tendons, damage to the anterior tibial artery and loss of flesh. To cover it, we did a modified radial forearm free flap, using a modification we developed here at Memorial Hermann. When you take that much flesh from the forearm, the patient ends up with a large secondary defect. We've modified the free flap so that we can close the donor site without disfigurement."

Fisher doesn't recall any of his hospital stay or his first two weeks at home. "Once my wife got to the hospital, she stayed there by my side and never left," he says. "After I was discharged, we turned the den into a hospital room, and she slept near me on the couch."

He continues to see Dr. Gary in follow-up. "He's walking very well," the orthopedic surgeon says. "On his last visit, he and his wife brought his son, who wanted to thank me for saving his dad."

Fisher, who with his wife, Ashley Duran, has children ages 12, 9 and 7, believes the prayers and love he received from family members and friends who visited him in the ICU helped speed his recovery. "This has been a very painful and emotional ordeal, and I'm so grateful that Dr. Gary, Dr. Melissinos and all the others care so much about their work and their patients. If it weren't for them, I wouldn't be here. After they put me back together, they didn't expect me to be able to walk for two years. I went to therapy and fought and fought as much as I could and was walking in six months. I have no bad feelings about the accident because there's so much to be grateful for. The best part is being alive, and being back to being a daddy and husband again."



Research & Innovation



at McGovern Medical School at UTHealth and
the Memorial Hermann Red Duke Trauma Institute



Selected Publications

Osseous Fixation Pathways in Pelvic and Acetabular Fracture Surgery: Osteology, Radiology, and Clinical Applications.

Bishop JA, Routt ML Jr. Journal of Trauma and Acute Care Surgery. 2012 Jun. 72(6):1502-9.

Do Safe Radiographic Sacral Screw Pathways Exist in a Pediatric Patient Population and Do They Change with Age?

Burn M, Gary JL, Holzman M, Heydemann JA, Munz JW, Galpin M, Ambrose CG, Achor TS, Kumaravel M. Journal of Orthopaedic Trauma. 2016. 30(1):41-7.

Total Elbow Arthroplasty: Current Options.

Choo A, Ramsey ML. Journal of the American Academy of Orthopaedic Surgeons. 2013 Jul. 21(7):427-37.

Scapulothoracic Dissociation: Evaluation and Management.

Choo AM, Schottel PC, Burgess AR. Journal of the American Academy of Orthopaedic Surgeons. 2017 May. 25(5):339-347.

Prevalence Of Rotator Cuff Tears In Operative Proximal Humerus Fractures.

Choo A, Sobol G, Maltenfort M, Getz C, Abboud. Orthopedics. 2014 Nov. 37(11):e968-74.

Transiliac-Transsacral Screws for Posterior Pelvic Stabilization.

Gardner MJ, Routt ML Jr. Journal of Orthopaedic Trauma. 2011 Jun. 25(6):378-84.

“Push-Past” Reaming as a Reduction Aid with Intramedullary Nailing of Metadiaphyseal and Diaphyseal Femoral Shaft Fractures.

Gary JL, Munz JW, Burgess AR. Orthopedics. June 2014. 37(6): 393-6.

Can Thrombelastography Predict Venous Thromboembolic Events in Patients with Severe Extremity Trauma?

Gary JL, Schneider PS, Galpin M, Radwan Z, Munz JW, Achor TS, Prasarn ML, Cotton BA. Journal of Orthopaedic Trauma. 2016 Jun. 30(6):294-8.

Effect of Surgical Treatment on Mortality After Acetabular Fracture in the Elderly: A Multicenter Study of 454 Patients.

Gary JL, Paryavi E, Gibbons SD, Weaver MJ, Morgan JH, Ryan SP, Starr AJ, O Toole RV. Journal of Orthopaedic Trauma. 2015 Apr. 29(4):202-8.

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Do Transsacral-Transiliac Screws Across Uninjured Sacroiliac Joints Affect Pain and Functional Outcomes in Trauma Patients?

Heydemann J, Hartline B, Gibson ME, Ambrose CG, Munz JW, Galpin M, Achor TS, Gary JL. Clinical Orthopaedics and Related Research. 2016 Jun. 474(6):1417-21.

Addition of a Medial Locking Plate to an In Situ Lateral Locking Plate Results in Healing of Distal Femoral Nonunions.

Holzman MA, Hanus BD, Munz JW, O'Connor DP, Brinker MR. Clinical Orthopaedics and Related Research. Jan. 2016.

Management of Distal Femoral Nonunion with Dual Plating and Bone Grafting.

Holzman M, Hanus BD, Munz JW, O'Connor DP, Brinker MR. Clinical Orthopaedics and Related Research. 2016; 474: 1498-1505.

The Core Competencies for General Orthopaedic Surgeons.

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Do Transsacral-Transiliac Screws across Uninjured Sacroiliac Joints Affect Pain and Functional Outcomes in Trauma Patients?

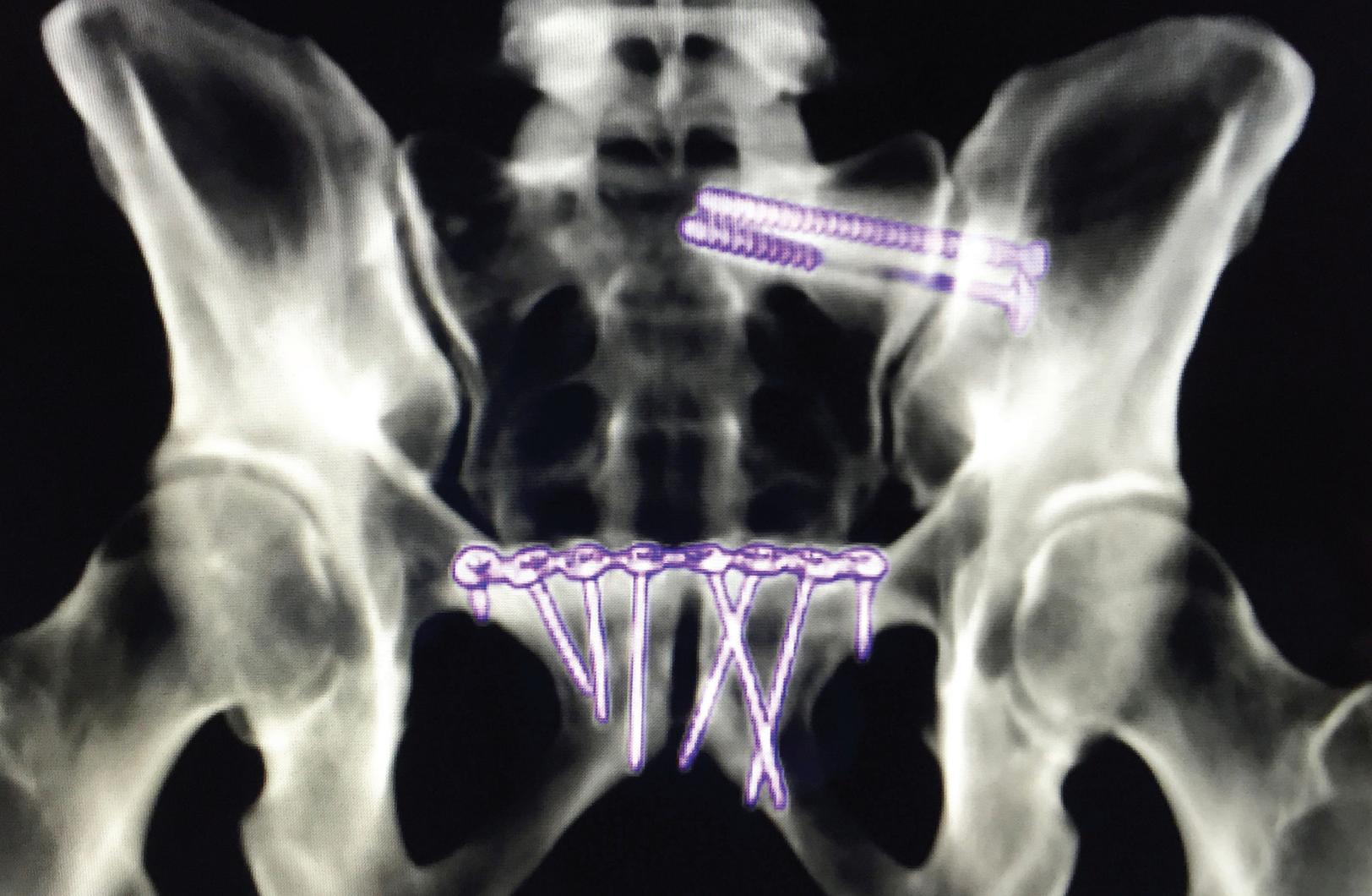
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Any Cortical Bridging Predicts Healing of Tibial Shaft Fractures.

Lack WD, Starman JS, Seymour R, Bosse M, Karunakar M, Sims S, Kellam J. Journal of Bone and Joint Surgery Am. 2014 Jul. 2. 96(13): 1066-1072.

Irreducible Fracture-Dislocations of the Femoral Head Without Posterior Wall Acetabular Fractures.

Mehta S, Routt ML Jr. Journal of Orthopaedic Trauma. 2008 Nov.-Dec. 22(10):686-92.



Comparison of External Fixation Versus the Trauma Pelvic Orthotic Device on Unstable Pelvic Injuries: A Cadaveric Study of Stability.

Prasarn ML, Horodyski M, Conrad B, Rubery PT, Dubose D, Small J, Rechtine GR. *Journal of Trauma and Acute Care Surgery*. 2012 Jun. 72(6):1671-5.

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Prasarn ML, Horodyski M, Conrad B, Rubery PT, Dubose D, Small J, Rechtine GR. *Journal of Trauma and Acute Care Surgery*. 2012 Jun. 72(6):1671-5.

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Comparison of 4 Airway Devices on Cervical Spine Alignment in a Cadaver Model with Global Ligamentous Instability at C5-C6.

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Are We Delivering Two Standards of Care for Pelvic Trauma? Availability of Angioembolization After Hours and on Weekends Increases Time to Therapeutic Intervention.

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Early Mechanical Failures of the Synthes Variable Angle Locking Distal Femur Plate.

Tank JC, Schneider PS, Davis E, Galpin M, Prasarn ML, Choo AM, Munz JW, Achor TS, Kellam JF, Gary JL. *Journal of Orthopaedic Trauma*. 2016. 30(1):e7-11.

Importance of Pelvic Radiography for Initial Trauma Assessment: An Orthopedic Perspective.

Verbeek DO, Burgess AR. *Journal of Emergency Medicine*. 2016.

The Blade Plate Revisited: Treatment of High Energy Proximal Femur Fractures.

Achor TS, Schottel PC, Hansen DH, McFall RG

This clinical study evaluates the indications, technical aspects, results, and potential complications of angled blade plate fixation for high energy proximal femur fractures.

Does Reduction Technique for Pelvic and Acetabular Injuries Affect Trauma-Induced Coagulopathy?

Byrd Z, Davis E, Routt ML, Gary JL

A Prospective, Cohort Study.

Subscapularis Peel for Open Reduction and Internal Fixation of Complex Proximal Humerus Fractures.

Cherney S, Choo A

This project evaluates a novel surgical exposure for certain complex fractures of the proximal humerus.

The Extended Posterior Approach or Open Reduction Internal Fixation of Scapular Fractures. A Case Series.

Cherney S, Choo A

This clinical study assesses the techniques, value, and risks of the extended posterior surgical exposure for scapular fractures.

The Current Value of Judet Oblique Acetabular Radiographs.

Davis E, Burgess A, Routt M

This study evaluates the current role of Judet oblique acetabular radiographs compared to modern pelvic CT scans.

Iliosacral Screw Pathways in the Pediatric Population: Are There Safe Bony Corridors?

Gary JL, Burn M, Holzman M, Galpin MC, Heydemann JA, Munz JW, Achor TS, Kumaravel M

This study measures the safe dimensions of iliosacral osseous fixation pathways in pediatric patients.

Early Mechanical Stabilization and Bleeding in Disruptions of the Pelvic Ring (EMS-BinD)

Gary JL and METRIC

This multi-center national study assesses the impact of early pelvic stabilization on pelvic related bleeding.

Utilization and Impact of an Orthopaedic Trauma Operating Room at a Level I Trauma Center with Respect to Treatment of Open Lower Extremity Fractures.

Harvin W, Crist B

This study evaluates the impact of a dedicated trauma operating room on open fracture management.

Mapping Anterior Column Acetabular Fractures and Clinical Implications Regarding Optimal Lag Screw Trajectory.

Harvin W, Crist B, Buck B

This study evaluates the common fracture pattern details for anterior column acetabular fractures and their optimal fixation screw locations.

Is the Posterior and Cranial Screw of the Inverted Triangle Configuration for Femoral Neck Fracture Fixation Safe?

Hoffman J, Kellam J, Routt ML, Gary JL

This cadaveric study evaluates the reliability and safety of a common fixation screw configuration for femoral neck fractures.

How Does the Vicis Helmet Effect Cervical Spine Alignment While Wearing Shoulder Pads?

Prasarn ML, Warth R, Pernik N, Kumaravel M, Kaplan G, Lowe W

This project is a laboratory in vivo study looking at cervical spine alignment using the new Vicis helmet for cervical football injuries. We will use static fluoroscopy to look at alignment with pads in place on a spine board as well as measure motion during the removal process using dynamic fluoroscopy.

Advanced Techniques for Intraoperative Acetabular Imaging.

Shaw J, Gary J, Routt M

New techniques for intraoperative acetabular imaging are evaluated in this clinical study.

Cervical Spine Kinematics are Better Preserved After Cervical Disc Arthroplasty Compared to ACDF.

Showery J, Rehtine GR, Tashman S, Prasarn ML

This project is a prospective study looking at motion preservation using dynamic fluoroscopy comparing cervical disc replacement versus traditional anterior cervical discectomy and fusion.

Reduction of Posterior Pelvic Ring Through Reduction of Anterior Ring.

Vemulapalli KC, Achor TS, Routt ML

Purpose: This clinical study assesses the quality of indirect posterior pelvic reduction after open reduction of the anterior pelvic ring.



Patient Stories *continued*



“Saving Maria Sonnen’s Leg” continued from page 21.

Sonnen did rehabilitation for three months and continues the work on her own. “It’s been a long, long process but it gets better all the time,” she says. “I’m not a quitter. I psych myself up by telling myself that I have the capability, stamina and strength to do this. Success doesn’t always come easily, and I had to do a lot of inner searching. I didn’t want to quit because it hurt.”

Dr. Gary says Sonnen is a testament to the skill of the Memorial Hermann-Texas Medical Center Orthopedic Trauma Service. “A success for us as orthopedic traumatologists is someone who, a year later, is back to function. We have the opportunity to help severely injured patients restore their life to normal, and because we see them over time, we establish long-term relationships. That strong relationship is very rewarding.”

Although she occasionally loses her balance, Sonnen doesn’t think of it as a disability. “I grab my walking cane and do my laundry,” she says. “What happened to me was a traumatic life-changing event, but if you make up your mind, you can do anything. Using my own skin and muscle, Dr. Melissinos reconstructed my leg. It’s a blessing that he took care of me. I’m not saying that what I went through was easy. It was hard and painful, but the rewards are great because I’m still here and I can walk. I can cook and bake, trim my rosebushes, and walk around my yard.”



“A Walking Miracle” continued from page 23.

Brian Southwell wishes to thank his entire medical team. In addition to Dr. Munz, they were trauma surgeons Michelle McNutt, MD, Joseph Love, DO, Rondel Albarado, MD, Bryan Cotton, MD, MPH, Saleem Khan, MD, John A. Harvin, MD, all of whom are faculty in the Department of Surgery, Division of Acute Care Surgery at McGovern Medical School at UTHealth; and plastic surgeon David Wainwright, MD, in the medical school’s Department of Surgery, Division of Plastic and Reconstructive Surgery.



“Always Moving Forward” continued from page 25.

Trained by the United States Air Force as an aircraft mechanic, Bryant served in England at RAF Lakenheath from 1995 to 2000, and at Eglin Air Force Base in Florida from 2000 to 2002. He worked as a private contractor in Afghanistan in 2009, 2010 and 2016. His wife, Erika Bryant, is a U.S. Navy veteran.

“I’m still amazed at how well we were taken care of at Memorial Hermann,” he says. “We’ve gone back to visit a few times. When the nurses see you, they give you a big hug and make you feel like family. Everyone was fantastic.”

Dr. Routt describes Bryant as “probably the happiest, most well-adjusted person I’ve ever known. He had a terrible injury, we fixed it, and everything went his way,” he says. “He was wonderful to have as a patient, and he worked hard in rehab. He did all we asked and more. With the involvement of Dr. Choo, Dr. Melissinos and Dr. Melton, he had a great team.”

Bryant returned to full-time work at All Around Aviation in Sugar Land in March 2017. In his spare time, he volunteers at his daughter’s school, teaching kids about amputation. “It’s important for them to know that on the inside, we’re the same people we always were.”



“Without Stopping” continued from page 27.

Vallone now sees Dr. Routt, Dr. Dodwad and Dr. McGarvey in follow-up as needed. “My goal was to finish physical therapy so that I could continue on my own,” he says. “I work out every day. I wanted to get back to my own home and my job. I had to get back to being me.”

All three surgeons consider his recovery remarkable. “Anthony is really tough, smart and well informed,” Dr. Routt says. “He knows what he’s got and knew what he had to do to overcome it. We rebuilt his pelvis, spine and ankle, and he worked hard to optimize the outcome of his surgery.”

“An ankle injury like Anthony’s can leave patients with posttraumatic arthritis,” Dr. McGarvey says. “He healed beautifully and went on with life.” Vallone spent months in a wheelchair, then graduated to a walker and crutches. “The damage to nerves in his spine caused significant weakness in both legs,” Dr. Dodwad says. “Every time I saw him after the accident, he was working harder and harder. Eventually he could walk into my clinic instead of using a wheelchair. To see that happen is amazing. It speaks to his character – that of someone who will always keep moving forward.”



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6411 Fannin
Houston, TX 77300
memorialhermann.org
713.222.CARE