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- Remove fluids and infectious materials
- Act as a barrier to external contamination
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Follow local institutional protocols for infection control and waste disposal procedures. Local protocols should be based on the applicable local government environmental regulations.

NOTE: Specific indications, contraindications, warnings, precautions and safety information exist for PREVENA™ Therapy. Please consult the applicable PREVENA™ System Clinician Guide instructions for use prior to application. Rx only.

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The Myoscience iovera° system is used to destroy tissue during surgical procedures by applying freezing cold. It can also be used to produce lesions in peripheral nervous tissue by the application of cold to the selected site for the blocking of pain. It is also indicated for the relief of pain and symptoms associated with osteoarthritis of the knee for up to 90 days. The iovera° system is not indicated for treatment of central nervous system tissue.


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We feel honored to present the second edition of the San Antonio Orthopaedic Journal. It is a great pleasure to share with our readers the developments within the Department of Orthopaedic Surgery. In the first place, we would like to congratulate the 2017/2018 chief resident class for graduating from our renowned training program. We are proud to announce that this is the first class in the history of this program with three female residents. Besides this special class of graduating residents, the past year was full of department highlights that are illustrated in this edition. Over the last year, we have been able to recruit three distinguished faculty including Frank Buttacavoli (adult reconstruction), Christopher Chaput (Spine), and Philip Jacobs (general orthopaedics). A special event of the past year was also Dr. Wilkins’ retirement. No other orthopaedic surgeon has advanced the field of pediatric orthopaedics as much as Kaye Wilkins and we are grateful for the legacy that Dr. Wilkins has brought to this program. Another highpoint of the past year was the indictment of Dr. Jesse DeLee into the Hall of Fame of the American Orthopaedic Society for Sports Medicine (AOSSM), the leading organization in the field of sports medicine. The legacy of our department remains an immense asset that we continue to cherish. We are proud to serve an institution that has been home to a total of six Presidents of the American Academy of Orthopaedic Surgeons (AAOS) including John Hinchey, Charles Rockwood, Bernard Morrey, James Heckman, Dave Teuscher, and Gerald Williams. Besides this legacy, the department continues to thrive and excel. During the calendar year 2017, a total of 30 peer reviewed journal manuscripts were published from this institution emphasizing the strong scientific impact that we continue to have. In this edition of the San Antonio Orthopaedic Journal, we present an overview of all published research from this department from the calendar year 2017. Another important section of this edition will be the Alumni section. We pride ourselves in the strength of our resident education and the rich history of this program. In this journal, we proudly present in chronological order all Alumni since from the start of this program. Moreover, we are illustrating the success story of Dr. Stephen McCollam, as only one example of a graduate from this program, who has pursued a successful career. Our department has also shown immense growth with regards to its international outreach as is illustrated in the Global Medicine section. Over the last year, our department has hosted visitors from all continents. These great relationships also provide unique opportunities for our residents. As part of their residency training, different
residents have had the chance to spend time at medical centers in Brazil, Columbia, Haiti, Switzerland, and Thailand. Finally, our department continues to foster an environment of comradery. The photo gallery will depict snapshots from various social events that have taken place over the last year.

Please enjoy the 2018 edition of the San Antonio Orthopaedic Journal. Over the last year, we have accomplished a lot of things to be proud of. We hope that our journal can deliver some of our spirit and dedication to patient care, education, research, and community outreach. We would like to thank all faculty, fellows, residents, medical students, and department staff for making this possible. In particular, we would like to thank the graduating class of 2018 for their hard work and dedication over the last five years.

***
In 1976 when I was privileged to join the three-man (Rockwood, Green, and Wilkins) orthopaedic faculty, it was clear that this program was a rising star. It would have been impossible however to forecast the tremendous success which is documented so clearly and thoroughly in this, the second volume of the San Antonio Orthopaedic Journal.

The quality and richness of each resident’s five-year experience attests to the substantial commitment by the faculty to their education. This commitment to resident education has been the bedrock of the program since its first day over 50 years ago, and I am delighted to see that the strong emphasis upon education continues.

The diverse and well-designed group of research abstracts reported here reflects a large investment in and commitment to scientific enquiry, both clinical and basic science. Without such an investment our specialty will not advance, and a robust research activity such as this is one hallmark which distinguishes the great programs from the rest.

The clinical service vignettes presented here, in addition to emphasizing education, reflect the huge and ongoing commitment the Department has made to service, particularly to patient care, and the spotlights on selected faculty activities and recognitions also reflect a strong interest in service to our national societies as well as to people throughout the world. Without sharing our talents with others, we shortchange those we serve; this program, in contrast, continues to give back to so many, in so many ways.

Finally, the highlights of social activities both within the program and through the activities of the Alamo Orthopaedic Society reflect the camaraderie and genuine warmth shared by all of us who have engaged in some way with the program.

I am extremely proud to be able to say that I have been a part of this program, and I congratulate Dr Brady and Dr Zelle on the production of a high-quality comprehensive compendium of its many current activities.

James D Heckman MD

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**Clavicle Plate and Screw System**
A comprehensive set of plates, screws and instrumentation designed to treat central third and distal clavicle fractures.

**Humeral SuturePlate® Fixation System**
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The first system designed specifically for patella fracture repair. FiberTape® tension band improves strength and reduces profile compared to traditional wire.*

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**Airrosti Value Analysis**
Total Episode of Care - Airrosti vs. Non-Airrosti (270 Day Episodes - All MSK DX Groups)

41% Reduction in total care cost in comparison to the cost of traditional care.

Airrosti Episode Cost

Total Care Cost

$1,094 = Airrosti Average Episode Cost

$1,645 = Non-Airrosti Average Episode Cost

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- Headaches
- Back Pain
- Elbow Pain
- Knee Pain
- Shoulder Pain
- Plantar Fasciitis

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240+ locations throughout Texas, Washington, Illinois, Ohio, & Virginia.

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Airrosti is an outcome-based healthcare group of musculoskeletal specialists who deliver high quality care through a consistent & evidence-based care pathway.

Airrosti providers are experts at rapidly resolving musculoskeletal injuries & spend one full hour with the patient on each visit to accurately assess, diagnose, & effectively treat the musculoskeletal injury/condition. This effective, hands-on approach to conservative care delivers exceptional outcomes & patient experience for non-surgical cases.

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**Data on file**
I am pleased to introduce the second edition of the Orthopaedic Journal of UT Health San Antonio, marking our department’s 51st anniversary. The past year has seen continued growth and stabilization of the department. I am very proud of the superb faculty we have either recruited or retained across all of our disciplines including orthopaedics, basic science, podiatry, and physical therapy. I am particularly proud of the wining culture we have created. Our residency and fellowship programs are re-invigorated and thriving, while attracting the best and brightest applicants from across the country.

We now have an expanded leadership team, a new practice administrator, and a new clinic manager. The vision and energy of the new team has dramatically expanded our innovative approach to further growth and development of our multiple programs.

Our faculty members continue to represent the academic mission proudly created and continually inspired by our “founding father” Charles Rockwood, Jr., MD. Through the tremendous mentorship provided by Drs. Rockwood, Wilkins, Corley, Morrey, and Green, our faculty continue to reach new heights on the national leadership front.

Our reach and representation across multiple specialties continues to grow.

For the first time in the history of our department, all orthopaedic subspecialties are well-represented and growing. Additionally, we are continuing to grow a service line approach with the addition of more advanced practice providers and complementary specialists such as plastic surgery and physiatry.

With the opening of our new Hill Country clinic, our providers now cover the largest footprint of our practice to date, including 4 major clinic locations and 7 hospital facilities. We fully expect to continue growth in every clinical division and in our basic and clinical science research programs.

With the firm groundwork we have laid the past 5 years, the significant momentum we are experiencing, and a new visionary SOM Dean now in place, I believe we are well-positioned for strong growth and continued success in the next 5 years. Stay tuned for exciting developments coming in the near future!

***
SPECIAL REPORTS

ACADEMIC PROMOTIONS IN 2017

The Department of Orthopaedics would like to congratulate the following individuals for their academic promotions:

Vaida Glatt, PhD
Promoted to Director of Basic Science Research

Roberto Fajardo, PhD
Promoted from Assistant Professor to Associate Professor

Ravi A. Karia, MD
Promoted to Department Vice Chair of Clinical Operations

Rajiv R. Rajani, MD
Promoted from Assistant Professor to Associate Professor

Promoted to Department Vice Chair of Research

Boris A. Zelle, MD
Promoted to Department Vice Chair of Education
NEW FACULTY

Buttacavoli

I am excited to join the faculty of the department of Orthopaedic Surgery at UT Health San Antonio.

I grew up in Miami Beach, Florida but had my first exposure to Texas when I attended Rice University on a golf scholarship. After completing my degree in Economics, I returned home to the University of Miami for Medical School. I was very fortunate to match for orthopaedic residency at UT Health San Antonio. During this time, I developed my specific interests within hip and knee reconstruction. After my residency, I completed my fellowship training in adult hip and knee reconstruction at Brigham and Women's Hospital, Harvard Medical School. After my fellowship in Boston, I traveled to Switzerland for additional training in hip reconstruction at Balgrist Hospital.

Upon returning from Switzerland, I decided to enter into private practice in Miami. This past October, after 2 years in Miami, I returned as staff to the same department where I once was a resident.

My specific interests include hip and knee replacements as well as revisions of failed replacements. I have clinical interest in improving long term patient outcomes within these procedures, and cost containment for future health care models without sacrificing patient satisfaction and outcomes. I have previous experience with patient specific implants, robotics, revision surgery, and the use of stem cells and biologics in treatment of hip and knee disorders. I am excited to help grow our department and be at the forefront of hip and knee deformity and arthritis treatment. I joined UT health San Antonio because I knew this would be the best place for me to make a lasting impact on the future of patient care.

Outside of my work in the clinic and hospital, I enjoy traveling with my wife, spending time with each of our families, and playing golf on the amateur circuit. My wife is a native of nearby New Braunfels, Texas. We look forward to building a family of our own near her hometown. We are excited to join the UT Health San Antonio Department of orthopaedics family. It has been a privilege and an honor to return to the department that built the foundation of my orthopaedic training. I look forward to a long career caring for patients and teaching future orthopaedic surgeons at UT Health San Antonio.

Chaput

Dr. Christopher D. Chaput is a second generation Texas spine surgeon. He was born in San Antonio when his father was in a military residency for neurosurgery. His father eventually went into private practice in Victoria, and Dr. Chaput grew up on a small ranch in the country near there.

Dr. Chaput graduated from Southwestern University in Georgetown, Texas, then attended Baylor College of Medicine in Houston (it was at this time that he met his wife, another San Antonio native). He did residency in orthopedic surgery at Scott & White Hospital/ Texas A&M HSC. After completing a fellowship in spinal reconstructive surgery in Baltimore, he was recruited back to Scott & White to help grow the spine division and create a center for orthopedic research that would introduce orthopedic residents to the research process and help to create advances in implant fixation, bone healing, and clinical outcomes.

During his time there he participated in trials that examined the effectiveness of cervical disk replacement, bone morphogenetic proteins and the use of native stem cells to improve fusion. He worked extensively with the
stem cell researchers at Texas A&M to develop carriers that help stem cells heal bone in the spine faster and more reliably. He has also helped to design implants in the cervical spine that make fixation stronger and easier to achieve. In the lumbar spine, minimally invasive techniques have allowed surgeons to decrease the soft tissue destruction inherent to traditional open spine surgery. However, these techniques often have a long learning curve and require more radiation exposure from a high dependency on intraoperative imaging. Dr. Chaput recently designed a system that enables surgeons to use minimally invasive techniques that is much less subject to those limitations and could help more surgeons safely incorporate less invasive techniques into their practice.

Since 2004, Dr. Chaput has been very involved in advances in treating a rare but devastating spine injury known as internal decapitation (atlanto-occipital dislocation). While at Scott & White, he was one of the first to document a high survival rate in these injuries if they are caught early and neurologic function is preserved. Because these ligamentous injuries can be hard to detect, he helped researchers at Baylor University develop methods that use machine learning (popularly referred to as artificial intelligence or AI) to automatically detect this spinal injury.

Dr. Chaput has extensive experience in minimally invasive and complex reconstructive techniques for the entire spine. He has a special emphasis on cervical spine (neck) issues including myelopathy, trauma and cervical deformity. His treatment goals for his patients are to avoid surgery if possible, do the smallest surgery that will reliably improve a person's quality of life, and to treat every patient in the same manner he would want a family member treated.

Dr. Chaput is excited to return to San Antonio as the Chief of Spine for the Department of Orthopaedics at UT Health. He hopes that he can contribute to resident education, research production, and clinical excellence while encouraging the growth of the department in general and the division of spine in particular.

Jacobs

My name is Philip M. Jacobs, M.D. I received my medical degree from the University of Nebraska in 1992. I completed my Orthopaedic Surgery residency at the University of Texas Health Science Center at San Antonio in 1997. I completed two fellowships after residency. The first was in Sports Medicine under the direction of Dr. Jesse DeLee. The second was a traveling fellowship in Shoulder and Elbow surgery under the direction of Dr. Charles Rockwood.

I have been in a private Orthopaedic Surgery practice in San Antonio for the past 18 years. I joined the faculty full-time at UT Health San Antonio in January of 2017. I specialize in Sports Medicine and Reconstructive Surgery in the knee and shoulder. I enjoy performing arthroscopic, minimally invasive open procedures, and total joint surgery in both the knee and shoulder.

I have had the opportunity to take care of professional, college, and high school athletic teams and athletes during my entire Orthopaedic career. I enjoy the practice of Sports Medicine as a specialty, as it allows me to get athletes, from professional to the weekend warrior back to active participation in their sport.

When not working, I enjoy traveling, playing golf, and playing tennis with my wife. We also share eight children, which tends to keep us busy as well.

I trained at UT Health San Antonio for my residency from 1992-1997. It is a privilege to return as a member of the faculty. I look forward to being a full-time faculty member at UT Health San Antonio in the Department of Orthopaedics. My goal is to help train and educate the future leaders of Orthopaedics. I will be supporting the
department in multiple areas to include Sports Medicine, Shoulder, and Joint Reconstruction.

**RETIREMENT OF DR. KAYE E. WILKINS, DVM, MD**

The summer of 2017 marked the clinical retirement of Dr. Kaye Wilkins. He continues to be active in resident education and international outreach. Dr. Wilkins earned in DVM from Colorado State University and had a large and small animal veterinary practice before deciding to pursue medicine in upright animals. He went to medical school at the University of Texas Southwestern Medical School in Dallas, TX and then stayed in Dallas to pursue his orthopedic training at Parkland Hospital. In between medical school and residency he was a member of the United States Air Force and stationed in Crete, Greece. While in Greece he was the Director of Base Medical Services. Upon his return to the states he completed orthopedic residency at Parkland Memorial Hospital and was the first, and only, orthopedic resident to graduate from the program in 4 years. After completion of his PGY-4 year it was decided that he had accrued all knowledge needed and he was allowed to leave for fellowship at the Hospital for Sick Children in Toronto, Ontario. This is considered the birthplace of pediatric orthopedics and many great pediatric orthopedists were trained in this program. Dr. Wilkins then came to San Antonio in 1973 to start his professional career in pediatric orthopedics. During a practice that spanned 5 decades he has co-authored the most widely read textbook in all of pediatric orthopedics, been president of the Texas Orthopedic Association, president of the Pediatric Orthopedic Society of North America, and trained 100s of orthopedists domestically and internationally. He has received the Distinguished Service award from POSNA as well as a lifetime achievement award in global education from the AAOS. He retires from clinical service as the holder of the Kaye Wilkins Endowed Chair in Pediatric Orthopedics within the Santa Rosa health system and as the holder of the President’s Council/Dielmann Chair in Pediatric Orthopedics at the University of Texas Health Science Center at San Antonio. We wish Kaye and Sidney happiness and love as they start this next part of their life together.

**DELEE**

**Induction to AOSSM Hall of Fame**

Dr. Jesse C. DeLee was inducted into The American Orthopaedic Society for Sport Medicine (AOSSM) Hall of Fame on July 21, 2017, joining the founders of this specialty. The AOSSM Hall of Fame was established in 2001. Since then, AOSSM has honored distinguished members of the Orthopaedic Sports Medicine community who have “contributed significantly to the specialty and set themselves apart” by election into the Hall of Fame. The AOSSM Hall of Fame is considered the most prestigious honor awarded.

Jesse C. DeLee, MD was reared in Port Arthur, Texas, and graduated from Thomas Jefferson High school in 1964. He attended the University of Texas in Austin and Lamar College. Dr. DeLee graduated from the University
of Texas Medical Branch at Galveston in 1970. There, he was awarded a membership to the Alpha Omega Alpha National Honor Society (AOA) his junior year. He completed his residency at the University of Texas Health Science Center at San Antonio (UTHSCSA) in 1975 followed by a fellowship in joint reconstructive surgery with Sir John Charnley in Wrightington, England. He was awarded the coveted American-British-Canadian Traveling Fellowship in 1983.

From 1978 to 1983, he served as full-time faculty member at UTHSCSA, where he continues a clinical professorship in orthopaedic surgery and teaches residents. In 1988, he founded the ACGME-accredited Sports Medicine Fellowship at UTHSCSA, which has trained more than forty Sports Medicine Fellows. In addition to his academic accomplishments at the University, Dr. DeLee founded the Nix Hospital Sports Medicine Clinic in 1983, and with his partner Dr. John Evans, he established the DeLee-Evans Foundation for Sports Medicine. The DeLee-Evans Foundation has awarded more than 85 college scholarships to high school students with an interest in athletic training. Dr. DeLee has contributed to orthopaedic surgery literature with more than 50 peer-reviewed articles and 17 textbook chapters. He is most proud of founding and co-editing with Dr. David Drez the textbook, Orthopedic Sports Medicine: Principles and Practice, currently in its 3rd edition.

Dr. DeLee co-edited the first AOSSM Sports Medicine Fellowship examination. He continues to serve as Co-Chairman of the AOSSM Examination Committee. Additional leadership positions held by Dr. DeLee include:

- Member / Committee Member, American Academy of Orthopaedic Surgeons, the American Orthopaedic Association, AOSSM, The Knee Society, American Orthopaedic Foot and Ankle Society, Herodicus Society
- Founding member, Arthroscopy Association of North America
- Chair, UTHSCSA Annual Symposium on Sports Medicine
- Chair, University Interscholastic League (UIL) Medical Advisory Committee, responsible for oversight of all medical aspects of high school athletics in Texas

“When I look back over my forty-five year career, I see my greatest accomplishment was and continues to be teaching and working with orthopaedic residents. If you teach each resident principles benefitting patients, then you have improved the quality of life of many people. That is a rare privilege.” – Dr. DeLee

***
RESIDENCY UPDATES

PROGRAM DIRECTOR’S REPORT

Rajiv R. Rajani, MD, Residency Director

The Orthopaedic Surgery Residency Program at UT Health San Antonio experienced an outstanding year in both clinical and academic production. Currently, 6 residents per year enroll as PGY-1’s. Residents come from around the US with Duke, UCSF, MUSC, and UTMB, and UTHSCSA medical schools representing our newest class of interns.

Clinically, residents rotate in all orthopaedic sub-specialities with UT Health Clinical Faculty. They also spend time with multiple adjunct faculty in the San Antonio area which allows them a unique flavor of both academic and private practice models.

Residents continue to provide care of our ubiquitous veteran population at the Audie Murphy VA Hospital. Through these diverse training institutions, our residents are uniquely trained to adapt and handle challenging patient care scenarios.

Highlights of the 2017 year include achieving full Continued Accreditation by the ACGME without any citations or areas of concern, 100% pass rate for graduating chief residents in 2017, and the institution of an optional international elective for PGY-4 residents.

During the fall of 2017, PGY-4’s Thomas Hand and Andrew Lee utilized time to travel to Davos, Switzerland and Sao Paolo, Brazil to perform visiting externships. This was due to the financial support of the department and a philosophy of thinking globally. Please see their write-ups in another section of the journal. This experience will continue with PGY-4 Antonio Webb traveling to Thailand on an AO fellowship grant. We expect to continue this experience in the upcoming years.

A hallmark of our residency is the robust clinical training that residents obtain. Although case logs are a difficult way to compare residency surgical volume, our graduating chief residents collectively were in the 75th percentile for open surgical cases. This number is a far more accurate representation of true surgical experience, as it does not include procedures like injections, manipulations, or closed fracture treatments.

The residency program had a successful 2017 but with higher expectations in 2018, we aim to increase surgical volumes, continue achieving perfect board pass rates, and increase clinical research productivity. Thank you to all the faculty and staff, especially Residency Coordinator Terri Hill and Assistant Coordinator Joseph Soliz, that assist our residents to be the professionals that we know they can be!
GRADUATING RESIDENTS CLASS OF 2018

Katherine “Katie” Christine Bartush

Katherine “Katie” Christine Bartush grew up in South Bend, Indiana where she was Salutatorian at Penn High School. Afterward she moved to Dallas, Texas where she was a member of the Southern Methodist University Women’s Soccer Team and received both academic and athletic scholarships. She graduated Summa Cum Laude with a BBA in Finance and minor in Chemistry. She was drawn to Orthopedics after several ACL reconstructions. She attended medical school at UTHSCSA where she graduated Alpha Omega Alpha and received the Charles Rockwood, MD Award for student excellence in Orthopedics. As a resident, she won 3rd place in the Aust Surgical Society Competition in Clinical Research for her work on the study of trauma patients lost to follow up with Dr. Zelle. Following in the footsteps of several other UTHSCSA residents, she will spend her final year of training at the Dr. James Andrews ASMI Sports Medicine Fellowship in Birmingham, Alabama. She is looking forward to helping all of her patients stay active. She enjoys tennis, skiing, going to the lake, country dancing, traveling, and spending time with her co-residents outside of the hospital.

Christina I. Brady

Christina I. Brady, MD, was born in Colorado Springs, Colorado, and grew up in Colorado, Utah and Washington. Her father is a physician and was her inspiration to pursue medicine. She graduated from the University of California, San Diego with a degree in Biochemistry and Anthropology. She became interested in medical research during college, and worked during the summers at Los Alamos National Laboratories (LANL) in New Mexico. After being awarded the Department of Energy, Science Undergraduate Laboratory Internship Fellowship, she continued her research for an additional post-baccalaureate research year at LANL in nanotechnology. At Los Alamos, she met her future husband Zachary Fulton. They both attended medical school at the University of New Mexico. Following medical school, both Christina and Zach moved to San Antonio, Texas to complete their residencies in orthopedic surgery and radiology, respectively. During residency, Christina received recognition for excellence for patient care by the Audie Murphy VA Hospital, completion of the Clinical Safety and Effectiveness Course, and was peer nominated as a representative for the Graduate Medical Education Committee. During residency she has become very interested in upper extremity orthopedics, and she has published a book chapter and multiple research papers on upper extremity surgery. Following residency, Christina will be staying in San Antonio to complete a fellowship in hand surgery at the Hand Center of San Antonio.

Christina hopes to pursue a career in academic orthopaedics. During her spare time, she enjoys being with friends and family. Her hobbies include reading, painting, running and skiing. Christina and Zach are expecting their first child this upcoming summer.

Gregory V. Gomez

Gregory V. Gomez, MD is originally from San Dimas, California and was raised in a tight knit family that supported and challenged him to strive for excellence. He was exposed to Orthopaedic Surgery early on due to sports related injuries as a teenager and never looked back. Dr. Gomez attended Chapman University to play baseball while pursuing his pre-med studies. It was in college that he met his wonderful and supportive wife, Lindsey. He graduated in 2007 with a Bachelor of Science in Biology with an emphasis in Exercise Physiology and double minors in Business Administration and Chemistry. After working for a couple of years, he attended medical
school at the Keck School of Medicine at the University of Southern California and graduated in 2013. Daring for an adventure outside of California he matched into the storied orthopaedic program started by Dr. Charles Rockwood here at UT Health San Antonio. While here in San Antonio, Dr. Gomez and his wife have been blessed with the births of their two daughters; Avery (3) and CJ (1). Prior to residency, Dr. Gomez always had a special interest in shoulder and elbow pathology due to his baseball background. This interest flourished throughout residency due to the excellent mentoring from Dr. Anil Dutta and Dr. Michael Wirth. After graduation, he will complete the Shoulder & Elbow Fellowship at the University of Pennsylvania. Once done with training, he hopes to take his talents back to Southern California to be close to family and the beach.

Brett Hall

Brett Hall, MD, was born on December 30, 1983 in Cedar City, UT. Growing up in southern Utah, he enjoyed taking part in numerous outdoor activities including wakeboarding, golfing, hunting, hiking, and camping. He worked alongside his father and brothers in the family flooring business starting at a young age. After his first year in college, Brett served a mission for the LDS church in Porto Alegre, Brazil. He continued his education at Southern Utah University upon returning from Brazil earning a bachelor's degree in chemistry. Brett met his wife Jessica shortly after graduation, and they were married after his first year of medical school at the Medical College of Wisconsin. Their first son Parker (4) was born the week of medical school graduation. Brett was fortunate to match into orthopaedic surgery at UT San Antonio. Since being here, his family has continued to grow with the addition of Declan (2) and Elsie (1). Residency has been a busy and rewarding time where he has been able to grow as a father, husband, and physician. He has truly enjoyed his time in residency developing into an orthopaedic surgeon and the friends made along the way. After residency, Brett and his family will be moving to Irvine, California to complete a fellowship in sports medicine with Kaiser Permanente. Post fellowship Brett would like to return to the mountain west and practice general orthopaedics.

Christopher G Larkins

Christopher G Larkins, MD was born December 25, 1980 in Mesa, Arizona to two wonderful, supportive parents. After high school Chris enlisted in the United States Army Infantry. By the end of his 4 year enlistment he had made the rank of sergeant and had been deployed to both Afghanistan and Iraq. While deployed, he had the opportunity to serve on a sniper team as well as a reconnaissance team. Although he was an enlisted infantryman, he was selected to go to Emergency Medical Technician school where he found his love of medicine. After his time in the Army, he attended Arizona State University where he graduated Magna Cum Laude and went on to Medical School at the University of Arizona College of Medicine in Tucson. He was fortunate enough to obtain a residency position in the department of orthopedic surgery at UT Health San Antonio. Chris has participated in numerous studies at UT Health San Antonio to include cadaver studies and retrospective reviews. The highlight of his residency was working with Dr. Galindo who inspired him to pursue a career in foot/ankle surgery. During all of his travels and adventures,
his wife Shelby has been there to support him. Chris and Shelby have been blessed with two boys, Braydon (9) and Vander (7). Chris will complete a fellowship in foot/ankle surgery at The Steadman Clinic in Vail, Colorado and hopes to return to San Antonio in order to practice his specialty.

**Gina R. Lesko**

Gina R. Lesko, MD, was born on August 17, 1987 in Trumbull, Connecticut, and grew up primarily in Allen, Texas. She was a high level competitive gymnast throughout her teenage years and continued this as a member of the University of Oklahoma Women’s Gymnastics team during her undergraduate education. She graduated from OU in 2009 with a Bachelor of Science degree in Zoology and was named an NCAA Academic All-American and member of the Academic All-Big 12 team. Gina then went on to attend the University of Oklahoma College of Medicine, where her gymnastics background led her in the pursuit of orthopedics. She was a founding member and served as Education Chair for the Women's Orthopedic Interest Group while in medical school and partnered with the Girl Scouts to provide healthcare profession exposure to young females. She was then privileged to return to Texas for residency at UT Health San Antonio. While in residency, Gina became interested in foot and ankle surgery because of both a personal history of injuries and the inspiring mentorship of Dr. Mayo Galindo. She has greatly appreciated the rich legacy of the residency program and hopes to carry its values with her throughout her career. San Antonio is also where she met her fiancé, Casey Cahill, MD, an ophthalmologist and former UTHSCSA resident as well. After graduation, Gina will complete a foot and ankle fellowship at the Illinois Bone and Joint Institute in Chicago. She then hopes to join a private practice with a focus on sports foot and ankle injuries. In her spare time, Gina enjoys spending time with friends and family, travelling, snowboarding, running and biking, and keeping active in general. Gina and Casey are set to be married in May.

**GRADUATE MEDICAL EDUCATION (GME) UPDATE**

**John S. Toohey, MD**

Assistant Dean for Graduate Medical Education

Your residency program is not what it used to be! Residency programs have seen dramatic changes in the past few years. The Accreditation Council for Graduate Medical Education (ACGME) is the nationwide credentialing body entrusted with oversight of residency education. Each specialty has input via the resident review committee (RRC). In Orthopaedic Surgery, the review committee is made up of equal members of the American Academy of Orthopaedic Surgeons, the American Medical Association and the American Board of Orthopaedic Surgery. In 2012, the Next Accreditation System (NAS—yet another acronym) has dramatically changed how we review our residency programs. In the past, residency programs were required to have a site visit every five years. This meant a few months of panicked preparation. In the new system, yearly electronic updates are completed each fall with letters of notifications indicating reaccreditation arriving in late winter. Every two years, a separate hospital visit is required to assess what kind of learning environment exists in the major teaching institution(s). The latter does not affect individual program accreditation. This is an attempt to get the sponsoring institution together with the hospital leaders to ensure that there is adequate discussion in policies about how the environment in which our residents learn is truly a learning environment; not just a service environment.
The overall and far reaching goal of the ACGME has been to ensure a positive learning experience for our residents. It is taboo to consider residents as service providers. In fact, citations are given if residents perform services that are normally provided by technicians, nursing staff, or other allied health members. This is a dramatic departure from days of yore. Those of us in Graduate Medical Education often consider these unfunded mandates as overwhelming and unnecessarily laborious. This is no different from what else is taking place in medicine.

A few of the Orthopaedic subspecialty societies provide independent accreditation. We have found it to be a remarkably efficient, yet thorough process. There is a movement to accomplish this with all subspecialty programs, including the CORE Residency Programs. The logistics of this are such that it will be some time before that happens. This is particularly true in sports medicine and hand surgery which have unique requirements for their certifying examinations. Our early experience with the trauma and shoulder and fellow accreditation process has been excellent. The UT Health Orthopaedic Surgery Residency Program and their subspecialty programs maintain high standards. Our core residency program received a letter of commendation during the 2017 accreditation cycle. All of our programs are fortunate to have strong leadership. We continue to attract the highest quality candidates who develop into well-educated Orthopedic Surgeons. Our Orthopaedic residency program continues to be one of the highest performing programs in our institution recently renamed UT Health.
ORTHOPAEDIC RESIDENTS 2017-2018

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INCLUSION MATTERS: THE PERRY INITIATIVE AND THE NTH DIMENSIONS PROGRAM

Sekinat McCormick, MD

The Perry Initiative

In the spring of 2017, The Perry Initiative was reintroduced to young women across the greater San Antonio area through the efforts of the orthopaedic department at UT Health San Antonio. Named in honor of Dr. Jacqueline Perry – a pioneer and one of the first female board-certified orthopaedic surgeons – The Perry Initiative is a national program run throughout the year in various cities across the country and hosted by local female orthopaedic surgeons and engineers. The objective of the Perry Initiative is to introduce young women to the fields of orthopaedic surgery and engineering through hands-on interactive learning. Participants spend the day first learning about both orthopaedic surgery and engineering in brief traditional lecture setting followed by the hands-on experience where they rotate through various work stations that include: suturing, intramedullary nailing, scoliosis correction, long bone plating, and external fixator placement. Each work station affords the participants an opportunity to work together as well as an opportunity to interact with female orthopaedists both in training and in practice. Just as Dr. Perry was a mentor to many, both women and men, this program named in her honor has the added benefit of allowing these very vital mentoring relationships to be established. Following the active portion of the program, participants and their parents were invited for a question and answer session where we were able to provide encouragement and support for their daughters’ potential futures in orthopaedics or engineering.

The Perry Initiative was not only a wonderful opportunity to bring excited young girls to our campus, it was also an opportunity to get several of the local female orthopaedic attendings together for teaching and mentoring purposes. The added bonus of this meeting was the fellowship...
amongst women in practice at all different years of experience. Mentoring at all stages in practice continues to be important and the Perry Initiative has allowed for us here in San Antonio to do just that.

This past year we were able to host about 30 female medical student participants and about 45 female high school participants. We were quite pleased with the turnout and are excited to continue to run this program as an annual event. This year’s program will take place on Saturday April 7. For more information about the Perry Initiative please visit the website: https://perryinitiative.org/.

Nth Dimensions

Founded by orthopaedic surgeons, Nth Dimensions is a non-profit organization whose primary mission is to address disparities in healthcare through pipeline programs targeted at women and underrepresented minorities. Their programming includes both yearlong and summer internships in clinical and research settings, hands on didactic workshops, establishment of mentor/mentee relationships, and online webinars to name a few. While originally focused on exposing medical students to orthopaedic surgery, the program has expanded its focus to include all fields of medicine. In addition to expanding their field of focus, Nth Dimensions now aims to reach more than just medical students by including programing focused on high school students, residents, fellows and those early in practice. The focus of their post-graduate mission is to expose young physicians to the tools needed to be successful both during residency and in their medical practice.

The success of Nth Dimensions’ pipeline programs is measured by the rate of participating medical students match rate into their targeted residency programs. An example of their growing success is the 83% match rate for its program participants who applied to orthopaedic surgery residencies.

Participation in Nth Dimensions’ programs is not isolated to those in need of guidance and exposure, participation is also extended to those established in their careers. These individuals serve as mentors, principal investigators, didactic leaders and lecturers. The success of the program is very much dependent on these physician volunteer leaders. The program is always happy to expand its ranks as a participant or physician volunteer and more information can be found on their website: www.Nthdimensions.org.
QI PROJECTS

Resident Quality Improvement Projects

Andrew Haus—Improving MSK oncology follow-up

Christina Brady—Surgical site infection prevention protocol in total joint arthroplasty

Katie Bartush—Pre-operative medication checklist for veterans

Trevor Wait—Inter-specialty institutional protocol for care of sacral decubitus ulcers

Antonio Webb—Increasing utilization of chlorhexidine gluconate preoperative antiseptic bath in inpatient hip arthroplasty patients

Antonio Webb—Methodist hip fracture pathway

Kenney Mensch—Total joints post-op order set

Christopher Larkins—Orthopedic in-training exam preparation

Case Martin—Development of quality improvement curriculum

Stephen Ernst—Delayed discharge of Sky tower patients

Stephen Ernst/Brayden Boyer—VA hip fracture protocol

Thomas Hand—Prevention of cast saw burns

Dietrich Kayser—Universal external fixator removal set

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REPORT ON CLINICAL OPERATIONS UPDATE

Ravi A. Karia, MD
Vice Chair of Clinical Operations

The strength of our program continues to be delivering exceptional clinical care. We are privileged to practice alongside great mentors such as Drs. Rockwood, Green, Wilkins, Corley and Delee who expertly pave the path by putting patients first. Their strongest living legacy lies here in South Texas with the thousands of people treated—past, present and future.

Our well-regarded clinicians treat conditions across a multitude of musculoskeletal issues ranging from complex high-energy trauma to advancements in shoulder reconstruction.

Being a major city near the US-Mexico border lends a unique clinical environment with many social challenges. Furthermore, there is an immense prevalence of chronic medical conditions such as diabetes and obesity. We have come to embrace and appreciate this experience as it furthers our own practice and clinical skills.

Currently, our group practice spans from a new county academic medical trauma center, our UT Health outpatient center, multiple private hospitals as well as outreach programs in the Rio Grande Valley and abroad. These unique venues keep the practice of orthopaedics fresh and exciting and also serve to give our residents a diverse, broad-based training experience.

Recently, we have placed an emphasis on quality improvement projects in the clinical realm. All residents participate in at least one and more often multiple significant projects throughout their training. For instance, we have developed a multi-disciplinary team approach for the management of geriatric hip fractures. This multi-year project includes development of new concise order sets, time-based expectations for various service lines, and initiates new and innovative pain control strategies. Agreements from medicine, cardiology, anesthesiology, and multiple hospital-based support systems have been a challenge to obtain but are a vital component for the success of this new system.

ADULT RECONSTRUCTION UPDATE

Marc DeHart, MD

The Adult Hip and Knee Reconstructive Service is growing. Residents continue to enjoy learning with a seasoned private practice knee expert, Dr. Jesse DeLee. The VA rotation with Drs. Markey, Morrey Jr, and Sayeed provides a wealth of clinical material as well as a healthy level of independence. The addition of two new faculty within the department has enhanced production in both ORs and clinic. Phil Jacobs MD increases the knee arthroplasty numbers and shares substantial expertise in shoulder cases. We are proud to welcome a UT Health Orthopaedic alum, Dr. Frank Buttacavoli He brings experience from...
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**LEVEL 1**
16 Randomized Controlled Clinical Studies2-17

**LEVEL 2**
3 Cohort Studies18-20

**LEVEL 3**
12 Case Controlled Studies21-32

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a private practice adventure in Florida and fellowship at Brigham and Women’s hospital where he helped teach residents at the Combined Harvard Orthopaedic Program. Dr. Buttacavoli also gathered international exposure learning about hip reconstruction in Zurich. The residents have warmly welcomed his enthusiasm for education and more robust learning experience with complicated revisions and challenging primaries. Dr. DeHart continues AAOS service as Co-Chair for the Workgroup creating clinical performance measures for the surgical management of osteoarthritis of the knee. He represents the AAOS on a committee that recommends the cost metrics for total knee replacement (CMS MACRA Episode-based Resource Utilization Measurement, Musculoskeletal-Non-spine).

The Adult Reconstructive service has furthered its effort to “tune” the University Hospital System (UHS) for managing arthroplasty patients. The current PGY 3 class contributed substantial time and energy to create and implement an up-to-date order set for the Sunrise EMR system. In anticipation for possible bundle payment options and in hopes of refining the inpatient care for our UHS patients, a team of administrators and nurses from UHS in coordination with our residents formed to create an “Arthritis Camp”. This is a preop class where patients and their families learn about the upcoming surgery from floor nurses and physical therapists who actively participate in their care. Expectations are set for early mobilization and timely discharge to home with home physical therapy. Social workers screen the patient for their needs and anesthesia doctors have an opportunity to insure adequate medical clearance. While it is still a work in progress, Arthritis Camp has prevented medical cancellations and decreased the average length of stay from over 4 days to less than 2 days. Complications and readmissions have not increased over prior periods. Over the 15-month program, there have been one dislocation, two infections and one quad tendon rupture in elective primary joints in a rather challenging population. Residents appreciate the increased efficiency but miss rounding on the patients on the weekend.

Efforts continue to secure hospital support to join the American Joint Replacement Registry. We have sought formal commitment from UT Health leadership for computer resources to develop the routine collection of outcome data for our hip and knee patients. As the service expands, we continue to look for surgeons who have a strong interest in teaching residents, who are interested in participating in research opportunities and desire to improve the world of hip and knee surgery.
The hand Service at the University of Texas Health Science Center at San Antonio continues to thrive nearly fifty years after it was first established by Drs. Green and Rockwood, as a division of Orthopaedics.

The same principles that were emphasized then continue to be stressed and strengthened today:

- A complete and detailed history
- A comprehensive physical exam beginning in either the right or left hemisphere and ending at the fingertip
- Use of appropriate ancillary studies that is laboratory, radiological, electrodiagnostic, and others that aid in the diagnosis
- Choosing the appropriate treatment for the patient and not just for the disease
- Adequate follow-up studies and appropriate consultants
- If surgical treatment is appropriate:
  - The surgical treatment should be timely
  - It’s better to know surgically, the whens and whys rather than the whats and hows
- An encyclopedic knowledge of the anatomy not just a passing interest
- Interested assistants
- Adequate time
- Adequate lighting
- The appropriate equipment and the proper instrumentation
- Adequate surgical draping and tourniquet if possible
- Extensile exposure, gentle handling of the tissues, hemostasis, radiograph studies, aseptic technique, an attempt to keep the tissues moist and not desiccated, reconstruction of the normal anatomy if possible, closure with no tension
- Sterile dressing and adequate post-op follow-up

All of the aforementioned principles have been taught to us by our mentors who are icons in Orthopaedics: Dr. David Green, Dr. Charles Rockwood, Dr. Tom Obrien, Dr. Spencer Rowland, Dr. Bill Sanders, Dr. Bob Hotchkiss, and Dr. Chris Pederson.

The hand experience takes our residents to a number of hospitals and out-patients facilities with our anchor at University Hospital and Audie Murphy VA Hospital. Most of the work at University Hospital is trauma and soft tissue coverage spearheaded by Dr. Doug Cromack, Dr. Fred Corley, and our new associate Dr. Ryan Rose. The VA service headed by Dr. James Saucedo continues to do reconstructive surgery as well as older trauma.

Tuesday morning conferences are the mainstay of our didactic program and are run by the physicians and fellows at the Hand center.

Working as a team we continue to have private and clinic patients obtaining quality care from our team of faculty, fellows, and residents.

As I usually tell the resident applicants who come here to interview “I can’t think of anybody not wanting to come to San Antonio and do their Orthopaedic training here”.

FOOT AND ANKLE UPDATE

Mayo Galindo, MD

Prior to April 1, 2014, our residents were outsourced to Foot & Ankle specialists in the private community. Since then, Mayo J. Galindo, Jr., M.D. has joined the faculty to offer a blended experience between private practice and academic practice. Residents rotate two months in their PGY III year with Dr. Galindo and with Marvin R. Brown,
M.D. of the San Antonio Orthopaedic Group. They are exposed to all manner of medical and surgical problems that befall the lower extremity including diabetic foot issues, low energy trauma, adult hind foot and forefoot reconstruction, total ankle replacement, sports injuries, and ankle arthroscopy as examples. Our residents now also have staff participation at the VA Hospital and clinic. Didactic lectures constitute approximately twenty hours per year and two additional cadaver labs are available. Journal review includes Foot & Ankle topics about twice a year.

This past year, we hosted a visiting resident from Monterrey, Mexico, Jorge Reyes, M.D. Two of our residents, Gina Lesko, M.D. and Christopher Larkins, M.D. have committed to Foot & Ankle Fellowships. The future holds promise of expanding our “footprint” with additional faculty members on the horizon.

ORTHOPAEDIC ONCOLOGY UPDATE

Rajiv R. Rajani, MD

The Orthopaedic Oncology division of Orthopaedic Surgery experienced an outstanding year in both clinical and academic production. Comprised of Drs. Robert Quinn and Rajiv Rajani, the team was capable of managing bone and soft tissue tumors in an expedited fashion to the South Texas community. The service functions with PA Marc Deschaine and a 1st and 4th year resident and continues to benefit from a multi-disciplinary tumor board on Mondays at the UT Health Cancer Center.

Clinical highlights include providing care to over 70 bone and soft tissue sarcomas and over 400 surgical procedures in 2017 at UT Health and the Audie Murphy VA. During 2018, care for patients with bone and soft tissue tumors will transition to UT Health MD Anderson San Antonio as we enter our affiliate agreement with the world’s most prominent cancer institution. Dr. Rajani has been asked to serve on the Cancer Steering Committee to see that sarcoma services continue to be prominently featured.

In the past year, Dr. Quinn completed his term as the MSTS President and now serves on the MSTS board as the Immediate Past President. He has served on the AAOS Evidenced Based Medicine and Value Committee as AUC section leader. He recently was honored to be named the chair of the AAOS Council on Research and Quality, one of the most prominent and influential positions in all of Orthopaedic Surgery. Meanwhile, Dr. Rajani completed his tenure on the MSTS Evidenced Based Medicine Committee where he successfully applied and was funded to create the Appropriate Use Criteria for Sarcoma Surveillance. He now serves as the Chair of the MSTS Fellowship Committee. Additionally, both served as co-authors on a revised chapter on Pathologic Fractures in Rockwood and Green’s classic textbook. Dr. Rajani continues to serve as the Tumor Section Editor on Orthoinfo.org.

In 2018, we look forward to expanding Orthopaedic oncology services through clinical time at the UT Hill Country offices, through the new UT Health MD Anderson affiliation, and with the assistance of our oncology colleagues in the community.

PEDIATRIC ORTHOPAEDICS UPDATE

Grant Hogue, MD

The pediatric orthopaedic service has had an exciting year with continued growth and expansion of our footprint in the city. Current faculty includes Grant Hogue MD, Sekinat McCormick MD, Paige Burau NP, and Dr. Kaye Wilkins. Our residents have continued to travel abroad with Dr. Wilkins as he teaches and treats children in Mexico, Haiti, and Central America.
Division research activities are robust with current studies focused on inequalities of care in pediatric fractures/scoliosis/sports injuries, trauma transfer systems, algorithms for care of pediatric trigger finger, and cost saving measures in clubfoot treatment. Many of these projects will be presented locally and nationally.

Dr. Hogue was named division chief in the spring of 2017 and later honored with the President’s Council/Dielmann Chair in Pediatric Orthopaedic Surgery and Spine Deformity. Dr. McCormick has been involved locally and nationally with the Ruth Jackson Orthopaedic Society, and continues to perform marvelous work on the admission committee at the school of medicine.

Lastly, our leader and mentor, Dr. Kaye Wilkins retired from clinical practice this year. His career in San Antonio has spanned over 5 decades and he continues to teach our residents on a weekly basis. His contributions to our program and our specialty cannot be overstated. A retirement reception was held on June 10, 2017 and was attended by surgeons from all over Texas as well as Mexico and India.

**SHOULDER AND ELBOW UPDATE**

*Michael A. Wirth, MD*

**Recent Success**

In early 2017 the Shoulder and Elbow program was accepted into the American Shoulder and Elbow Surgeons Match.

In August of 2017 the fellowship was renamed the “UT Health San Antonio Rockwood Shoulder and Elbow Fellowship”

This season marks the 37th year of the shoulder service founded by Charles A. Rockwood, Jr., M.D. One of the hallmarks of the shoulder service is the shoulder and elbow fellowship which has trained more than 70 orthopaedic surgeons from around the world including international fellows from Europe, Mexico, Asia, South America, Australia, and New Zealand. In three short months this year, we hosted visiting surgeons from Germany and Australia, and the Chilean President of the South American Shoulder and Elbow Society. In 2017, the shoulder service received American Shoulder and Elbow Surgeons Fellowship Program Accreditation which recognizes programs with the highest standard of comprehensive training, academic excellence, and best clinical practices.

One of the crowning achievements of 2017 was publication of the 5th Edition of Rockwood and Matsen’s, The Shoulder, a book that has become the definitive resource on the anatomy, mechanics, evaluation, and management of this complex joint. This addition to the literature was made possible by enlisting six editors, three associate editors, and a magnificent group of authors from around the world.

The addition of Anil Dutta, Bernie Morrey, John Hinchey, and more recently, Phil Jacobs, has added immeasurably to the depth of the shoulder service and the resident and
fellow teaching mission. Dr. Jacobs, fellowship trained in both sports medicine and shoulder, brings 18 years of clinical practice and expertise as a shoulder arthroplasty design surgeon.

Dr. Rockwood has courageously faced additional challenges to his health but despite all this, he has remained an inspiration to us and a vital part of the program.

**2017 – 2018 Shoulder and Elbow Fellows**

**PUBLICATIONS:**

**Book Chapter:**


**Journal Article:**

Stephens SP, Spencer EE, Wirth MA. Radiographic results of augmented allpolyethylene glenoids in the presence of posterior glenoid bone loss during total shoulder arthroplasty Journal of Shoulder & Elbow Surgery 2017 May; 26 (5): 798 -803


Submitted for Publication

Submitted for Publication
Hinchey, John, van Riet, R, Morrey, BF. Rupture of the Triceps Tendon. Morrey’s The Elbow and Its Disorders, 5th Ed. Editor: Morrey, Sanchez-Sotello

2017


2015

DOI: 10.1016/j.jse.2014.02.006

SPORTS MEDICINE UPDATE

John “Trey” Green, MD
The sports medicine service is continuing to grow and now includes surgeons, Trey Green and Phil Jacobs and physician assistant, Ada Montalvo. We are eagerly anticipating the addition of Denise Norton, a physiatrist who adds additional diagnostic and therapeutic capability. She is a graduate of the University of Rochester Medical Center physical medicine and rehabilitation residency and completed a fellowship in interventional spine and sports medicine.

Our 2017-2018 sports medicine fellow is Heather Chambers, a graduate of the John Peter Smith orthopaedic residency in Fort Worth. Congratulations to her and husband, Karl on the birth of their third daughter in December. Dr. Chambers will be taking a position at Scott & White Clinic in Marble Falls, TX. We look forward to having Kristalyn Mauch join us as a fellow August 1, 2018. She is a graduate of the University of Toledo College of Medicine and Life Science, and is currently completing her orthopaedic surgery residency at Detroit Medical Center/Wayne State University.

Resident education in sports medicine significantly changed this year. The junior rotation moved from the third to the second year in July. Earlier exposure to arthroscopy will enable residents to take better advantage of the opportunities and allow for a longer period of skill acquisition before the senior level fourth year sports rotation. A prerequisite arthroscopic skills course was developed using FAST work stations and dry models with donated arthroscopy towers. Thanks to Smith& Nephew, Stryker and Conmed Linvatec, there are arthroscopic towers with practice work stations in the department office, MARC, and UHS hospital.

Isaac Kim M.D., second year Orthopaedic Resident works on his Arthroscopic skills using the FAST station.
ORTHO PAEDIC TRAUMA UPDATE

Animesh Agarwal, MD

The orthopaedic trauma service at University Hospital (UHS) continues to be the busiest service that residents rotate through. The core faculty are comprised of three fellowship trained orthopaedic traumatologists: Animesh Agarwal, Ravi Karia and Boris Zelle; a fellowship trained shoulder specialist – Anil Dutta; a fellowship trained Hand Surgeon – Fred Corley and a fellowship trained plastic-hand surgeon – Doug Cromack. The integration of a plastic surgeon into the service has improved the care of our patients with open fractures to assist in timely coverage and enhance our outcomes. Care of the orthopaedic trauma patient is facilitated by three PA’s: John Kodosky, PA, PhD, Chris DeLallo, PA and Priscilla Ramos, PA as well as two clinical nurses: Melissa Lopez, RN and Georgina Perez, RN.

Approximately 7-9 residents rotate on the orthopaedic trauma service each month. We continue to have military residents rotate on the service as well. Starting with the academic year in 2019, the orthopaedic trauma service will have an Orthopaedic Trauma Association (OTA) accredited fellowship. We have been a site for an AO International Trauma fellowship since 2015. Resident education involves primarily hands on clinical training as well as didactic lectures, fracture conferences and journal clubs. Most recently, an orthopaedic trauma resident area was established in conjunction with UHS in proximity to the operating rooms and the trauma clinic.

University Hospital is the only civilian Level 1 trauma center in San Antonio and South Texas, covering all the way to Brownsville. In 2017 the UHS trauma service saw over 7200 patients in the ER of which over 5600 were admitted. The orthopaedic trauma service was consulted on over 1700 of these patients. There were over 420 direct admission to the orthopaedic trauma service for isolated orthopaedic injuries. The orthopaedic trauma service performed over 1750 orthopaedic trauma procedures in 2017 at University Hospital. A brand-new trauma clinic at UHS was built in 2017 which allows us to provide follow-up care for our patients. The service has over 15,000 clinic visits annually, and that number continues to grow. In partnership with UHS, a fragility fracture clinic was established utilizing the American Orthopaedic Association’s (AOA) Own the Bone program. Every year since 2014, the program has received Star Performer recognition by the AOA.

Clinical research continues to be an integral part of the orthopaedic trauma service. We have a clinical research nurse, Rachel Pesek, RN, whom has been instrumental in our projects. We continue to be involved in multiple studies as a satellite center for the Major Extremity Trauma Research Consortium (METRC). We are currently involved in three clinical studies and additionally have 13 active IRB protocols. In 2017, the division published over 10 articles, 1 book and contributed 3 book chapters.

* * *
RESEARCH REPORT

Boris A. Zelle, MD
Department Vice Chair of Research

It is with great pleasure that I introduce the research division of our department. The calendar year 2017 has been extremely productive. As you will see in this section, our department has produced an impressive number of publications. In 2017, we published approximately 30 peer-reviewed journal manuscripts indexed in PubMed. But, it is not only the absolute number of publications that reflects the strength of our research program. Many of these articles were published in premier orthopaedic journals. Moreover, the manuscripts arising from our department reflect the various areas of research that we continue to be involved in. But, we must do more. Future goals include the expansion of our clinical and basic science research programs. This will include fostering collaborations with investigators from UT, outside institutions, as well as industry. Moreover, we will continue to seek accrual of funding for our research including grants from foundations, industry, as well as federal institutes. Above all, the successful pursuit of high impact research represents a great asset to our residency program. It will remain a priority to provide research opportunities for our residents and medical students as an important contribution to their learning experience and career development. Currently, we are in the process of developing a structured research curriculum for our residents with the goal to improve the research experience of our trainees. In addition, we have launched an orthopaedic research fellowship that is open to medical students, who have an interest in pursuing an academic career in orthopaedic surgery.

We are looking back at a successful last year and we are looking forward to an even more successful next year. Research can never be accomplished single-handedly. Successful researchers always depend on their collaborators and co-workers. For this reason, I would like to express my gratitude to all of our supporters, collaborators, and sponsors.
## Shoulder Surgery Retractor System

**New!**

1. **Modified Thin Glenoid Retractor**
2. **Right Angle Hohmann Retractor**
3. **Modified Fukuda Retractor**
4. **Brown Deltoid/Richardson Retractor**
5. **Modified Darrach Retractor, Straight-Narrow & Wide**
6. **Modified Darrach Retractor, Bent-Narrow & Wide**
7. **Soft Tissue Shoulder Retractor**

This system includes two of each size of the Modified Thin Glenoid Retractors, and one of each of the other retractors.

**PRODUCT NO’S:**

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## Anterior Watson Jones Total Hip Arthroplasty System

Instrument system specifically designed for Direct Anterior Approach THR

1. **Awl – Left**
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6. **90° Cobra Retractor**
7. **Deep Hohmann Retractor**
8. **Straight Hohmann Retractor**
9. **Femoral Starter Drill**

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**FREE TRIAL ON MOST INSTRUMENTS**
Closed Incision Negative Pressure Therapy: International Multidisciplinary Consensus Recommendations

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4Plastic, Reconstructive, Microvascular and Aesthetic Surgery, University of Modena and Reggio Emilia, Modena, Italy
5Plastic Surgery, PeaceHealth Medical Group, Vancouver, WA, USA
6Division of Cardiothoracic and Vascular Surgery, Deutsches Herzzentrum Berlin, Berlin, Germany
7Surgery, Suburban Surgical Associates, St. Louis, MO, USA
8Division of Medical Sciences, University of Oxford, Oxford, UK
9Department of Surgery, Johns Hopkins University School of Medicine, Baltimore, MD, USA
10Department of Orthopaedic Surgery, Aalborg University Hospital, Aalborg, Denmark
11Division of Plastic Surgery, Anne Arundel Medical Center, Annapolis, MD, USA
12TriStar CV Surgery, Centennial Heart and Vascular Center, Nashville, TN, USA

Abstract

Surgical site occurrences (SSOs) affect up to or over 25% of patients undergoing operative procedures, with the subset of surgical site infections (SSIs) being the most common. Commercially available closed incision negative pressure therapy (ciNPT) may offer surgeons an additional option to manage clean, closed surgical incisions. We conducted an extensive literature search for studies describing ciNPT use and assembled a diverse panel of experts to create consensus recommendations for when using ciNPT may be appropriate. A literature search of MEDLINE, EMBASE and the Cochrane Central Register of Controlled Trials using key words ‘prevention’, ‘negative pressure wound therapy (NPWT)’, ‘active incisional management’, ‘incisional vacuum therapy’, ‘incisional NPWT’, ‘incisional wound VAC’, ‘closed incisional NPWT’, ‘wound infection’, and ‘SSIs’ identified peer-reviewed studies published from 2000 to 2015. During a multidisciplinary consensus meeting, the 12 experts reviewed the literature, presented their own ciNPT experiences, identified risk factors for SSOs and developed comprehensive consensus recommendations. A total of 100 publications satisfied the search requirements for ciNPT use. A majority presented data supporting ciNPT use. Numerous publications reported SSI risk factors, with the most common including obesity (body mass index ≥30 kg/
We recommend that the surgeon assess the individual patient's risk factors and surgical risks. Surgeons should consider using ciNPT for patients at high risk for developing SSOs or who are undergoing a high-risk procedure or a procedure that would have highly morbid consequences if an SSI occurred.

Denosumab Therapy for Giant Cell Tumor of Bone Pulmonary Metastasis

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4Orthopaedic Oncology, Department of Orthopaedics, University of Texas Health San Antonio, MC 7774, 7703 Floyd Curl Drive, San Antonio, TX 78229-3900, USA

Abstract

Case: A 68-year-old female was diagnosed with giant cell tumor of bone (GCTB) metastatic to her lungs. The patient was treated with IV denosumab for the course of 4.5 years for these metastases. The metastatic tumor burden decreased significantly after only 3 months of therapy. The size of the metastases has been stable for over 4 years.

Conclusion: Denosumab therapy has promise in the treatment of GCTB, including pulmonary metastasis. However, the long-term role of denosumab for pulmonary metastases is yet to be determined.
Is Diabetic Skeletal Fragility Associated with Microvascular Complications in Bone?

Roberto J. Fajardo

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Abstract

Purpose of Review: The objective of this literature review is to determine whether there are indications that microvascular complications occur in diabetic bone. Evidence definitively linking diabetic skeletal fragility with microvascular complications in bone remains elusive.

Recent Findings: Circumstantial evidence, some recent and some lost to time, suggests that atherosclerotic vascular diseases such as peripheral arterial disease cause poor blood perfusion of bone and subsequent hypoxia and contribute to low bone density and high cortical porosity, patterns similar to some recently observed in diabetic subjects. Evidence also exists to suggest that potentially anti-angiogenic conditions, such as impaired vascular endothelial growth factor (VEGF) signaling, predominate in diabetic bone.

Summary: Microvascular complications may contribute, in part, to diabetic skeletal fragility but data supporting this interpretation are primarily circumstantial at this time. This review highlights gaps in our knowledge and hopefully spurs further discussions and research on this topic.

An Osteoblast Origin for Craniofacial Dysplasia in Neurofibromatosis Type I

Ibraheem K. Bamaga¹, Regina P. O’Sullivan², James Schmitz³, Weston Fath³, Roberto J. Fajardo³, & Kevin P. McHugh⁴

¹School of Dentistry, University of Florida, USA
²PBC BioMed, Europe
³Department of Orthopaedics, University of Texas Health Science Center at San Antonio, USA
⁴Department of Periodontics, University of Florida College of Dentistry, USA

Abstract

Sphenoid wing dysplasia (SWD), which results in a craniofacial deformity, is the third most common skeletal deformity in Neurofibromatosis Type I (NF1) patients. A neurofibromin osteoblast conditional deletion mouse model (Nf1ob-/-) has been developed to study the skeletal abnormalities in NF1. No overt morphological phenotype is seen in the appendicular or axial skeleton of these mice. Nf1ob-/- mice have been shown to have increased bone porosity and lower bone density. We noted a progressive craniofacial deformity, which results in cranial asymmetry, malocclusion and unilateral proptosis of an eye. To assess this deformity, we employed micro-computed tomography (μCT) and geometric morphometric analysis to compare Nf1ob-/- mouse skulls to control animals. Landmarks were placed on the images at 13 biologically relevant cranial anatomical sites. Analysis of distances and angles between these landmarks revealed that there is significant variation between the Nf1ob-/- mice and controls. We found that the nasal and frontal bones of Nf1ob-/- mice skulls are deviated from the central line, whereas it was straight in controls. The nasal region is tipped downward in Nf1ob-/- mice. We also noted that the cranium shows a trend toward macrocephaly in Nf1ob-/- mice whereas other measurements were within the range of normal control mice. These differences correspond to those seen in craniofacial dysplasia and SWD in NF1 patients. No tumors were found associated with the craniofacial dysplasia in Nf1ob-/- mice. Our results identify a primarily osteoblast origin for the pathogenesis of craniofacial dysplasia in Nf1ob-/- mice and strongly support an osteoblast origin for SWD in NF1. In addition, we identify and validate a novel mouse model with which to explore molecular mechanisms and test preventative treatments for SWF in NF1.


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A Concert between Biology and Biomechanics: The Influence of the Mechanical Environment on Bone Healing

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Abstract

In order to achieve consistent and predictable fracture healing, a broad spectrum of growth factors are required to interact with one another in a highly organized response. Critically important, the mechanical environment around the fracture site will significantly influence the way bone heals, or if it heals at all. The role of the various biological factors, the timing, and spatial relationship of their introduction, and how the mechanical environment orchestrates this activity, are all crucial aspects to consider. This review will synthesize decades of work and the acquired knowledge that has been used to develop new treatments and technologies for the regeneration and healing of bone. Moreover, it will discuss the current state of the art in experimental and clinical studies concerning the application of these mechano-biological principles to enhance bone healing, by controlling the mechanical environment under which bone regeneration takes place. This includes everything from the basic principles of fracture healing, to the influence of mechanical forces on bone regeneration, and how this knowledge has influenced current clinical practice. Finally, it will examine the efforts now being made for the integration of this research together with the findings of complementary studies in biology, tissue engineering, and regenerative medicine. By bringing together these diverse disciplines in a cohesive manner, the potential exists to enhance fracture healing and ultimately improve clinical outcomes.

The “Road to Union” Protocol for the Reconstruction of Isolated Complex High-Energy Tibial Trauma

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7Department of Surgery, School of Medicine, University of Queensland, Australia
8Queensland University of Technology, Orthopaedic Research Institute, Australia

Abstract

Introduction: The purpose of this study was to describe a standardized staged approach, “The Road to Union”, for the reconstruction of isolated complex tibial trauma, both acute and chronic in nature.

Methods: This retrospective study included all patients treated for complex tibial trauma at a specialized limb reconstruction centre, including acute open fracture as well as infected and aseptic non-unions. This standardized approach includes eight specific steps, employed in sequence. The time in external fixation (EFT), the external fixation index (EFI), and the distraction consolidation index (DCI) were the primary outcome measures. The relationship between EFI and DCI was assessed using Pearson's moment correlations.

Results: Thirty-two patients with a mean age of 34.7 ± 14.2 years were included; 12 were treated for complex open tibial fractures with bone loss, 13 for infected non-unions, and 6 for aseptic non-union. The mean bone defect was 66 ± 32 mm. The total EFT was 42.5 ± 14.8 weeks; the EFI measured 51.9 ± 25.3 days/cm, and the DCI measured 48.3 ± 21.4 days/cm. Union was achieved in 29 out of 32 patients (91%), and there was a strong and significant relationship between EFI and DCI (r = 0.92, p = 0.0001) measurements. Pin site infections were observed in 11 patients, and 3 patients had persistent non-union. Three patients underwent delayed amputations when reconstructive procedures were unable to achieve union.

Conclusion: The findings of this study demonstrate that a standardized staged treatment protocol of debridement, circular external fixation, soft-tissue management, distraction osteogenesis, and functional rehabilitation can result in a high rate of union in cases of complex tibial trauma, both acute and chronic in nature.


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⁶Department of Surgery, School of Medicine, University of Queensland, Herston 4006, Australia

Abstract

Aim: To perform a bibliometric analysis of publications rates in orthopedics in the top 15 orthopaedic journals.

Methods: Based on their 2015 impact factor, the fifteen highest ranked orthopaedic journals between January 2010 and December 2014 were used to establish the total number of publications; cumulative impact factor points (IF) per country were determined, and normalized to population size, GDP, and GDP/capita, comparison to the median country output and the global leader.

Results: Twenty-three thousand and twenty-one orthopaedic articles were published, with 66 countries publishing. The United States had 8149 publications, followed by the United Kingdom (1644) and Japan (1467). The highest IF was achieved by the United States (24744), United Kingdom (4776), and Japan (4053). Normalized by population size Switzerland lead. Normalized by GDP, Croatia was the top achiever. Adjusting GDP/capita, for publications and IF, China, Indian, and the United States were the leaders. Adjusting for population size and GDP, 28 countries achieved numbers of publications to be considered at least equivalent with the median academic output. Adjusting GDP/capita only China and India reached the number of publications to be considered equivalent to the current global leader, the United States.

Conclusion: Five countries were responsible for 60% of the orthopaedic research output over this 5-year period. After correcting for GDP/capita, only 28 of 66 countries achieved a publication rate equivalent to the median country. The United States, United Kingdom, South Korea, Japan, and Germany were the top five countries for both publication totals and cumulative impact factor points.
Orthopaedic Research in Australia: A Bibliographic Analysis of the Publication Rates in the Top 15 Journals

Erik Hohmann¹², Vaida Glatt¹, & Kevin Tetsworth⁴⁵

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⁴Department of Orthopaedic Surgery, Royal Brisbane Hospital, Brisbane, Queensland, Australia
⁵Department of Surgery, School of Medicine, The University of Queensland, Brisbane, Queensland, Australia

Abstract

Background: To investigate the publications rates and characteristics of the authors for manuscripts originating from Australia in the 15 highest ranked orthopaedic journals over a 5-year period.

Methods: The 15 highest ranked journals in orthopaedics, based on their 2015 impact factor, were used to establish the total number of publications and cumulative impact factor points between January 2010 and December 2014. The affiliations of the primary author and co-authors were used to determine the involvement of Australian trained orthopaedic surgeons. Study location, research topic and anatomic areas were recorded.

Results: A total of 478 publications were identified; 110 of these manuscripts were principally authored by Australian trained orthopaedic surgeons or medical professionals affiliated with orthopaedics. In addition, 158 articles were published with orthopaedic surgery involvement where one of the co-authors was an Australian trained surgeon. Australian orthopaedic surgeon (FRACS) involvement was most commonly observed in the knee (n = 90; 33.6%) followed by the hip (n = 69; 25.7%) and basic sciences (n = 27; 10.1%). Surgeons in Sydney had the highest number of publications (n = 95; 35.4%), followed by Adelaide (n = 55; 20.5%) and Melbourne (n = 54; 20.1%).

Conclusion: The results of this study demonstrate that the minority (23%) of the publications originating from Australia in the 15 highest-ranking orthopaedic journals were principally authored by either an Australian trained surgeon or a trainee surgeon. A total of 59% of the publications focused on the hip and knee. Sydney was the leading region, followed by Adelaide and Melbourne. These three regions published 76% of all manuscripts identified during the 5-year study period.

Early or Delayed Reconstruction in Multi-Ligament Knee Injuries: A Systematic Review and Meta-Analysis

Erik Hohmann1,2, Vaida Glatt3, & Kevin Tetsworth4-7

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2Medical School, University of Pretoria, South Africa
3Department of Orthopaedic Surgery, University of Texas Health Center, San Antonio, TX, USA
4Department of Orthopaedic Surgery, Royal Brisbane Hospital, Herston, Australia
5Department of Surgery, School of Medicine, University of Queensland, Australia
6Queensland University of Technology, Australia
7Orthopaedic Research Institute of Australia, Australia

Abstract

Background: Whether early or delayed surgical intervention in patients with multi-ligament injuries results in better outcomes, is of current and controversial debate.

Purpose: The purpose of this study was to perform a meta-analysis comparing early versus late surgical treatment of multi-ligament knee injuries.

Methods: We performed a systematic review of Medline, Embase, Scopus, and Google Scholar to identify relevant studies in the English and German literature. Eligibility criteria included studies comparing early or delayed surgical interventions for multi-ligament knee injuries, with a minimum follow-up of two years, reporting the primary clinical outcome using a validated functional scoring system and range of motion. Exclusion criteria were patients treated with multi-trauma, head injury, non-union, lower extremity fractures, or a documented history of previous knee injuries. Publication bias was assessed by funnel plot, and the risk of bias was established using the Cochrane Collaboration's risk of bias tool. Heterogeneity was assessed using X2 and I2 statistic.

Results: Eight studies (n = 260 patients) were included in the analysis. 149 patients were treated early with a mean of 10.6 days; 111 patients were treated late with a mean of 294 days. The pooled estimate for clinical outcome demonstrated that early surgery resulted in significantly higher Lysholm scores (SMD 0.669, 95% CI: 0.379 to 0.959, p = 0.0001, I2 = 0%). Thirty-one per cent of all patients with early surgery had a normal or near normal knee, whereas only 15% of patients with late reconstruction reported the knee to be normal or near normal. The pooled estimates for total ROM did not demonstrate a significant difference between the groups (SMD 0.113, 95% CI: -0.271 to 0.498, p = 0.564, I2 = 35.57%).

Conclusions: The results of this meta-analysis suggest that early surgical intervention in multi-ligament injuries of the knee produces a significantly superior clinical outcome, compared to late reconstruction. Although an overall trend of improved total range of knee motion was also demonstrated, this was very small and unlikely to be clinically relevant.

Open Versus Arthroscopic Surgical Treatment for Anterior Shoulder Dislocation: A Comparative Systematic Review and Meta-Analysis Over the Past 20 Years

Erik Hohmann1,2, Kevin Tetsworth3-6, & Vaida Glatt7

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7Department of Orthopedic Surgery, University of Texas Health Science Center, San Antonio, TX, USA

Abstract

Background: The purpose of this study was to perform a meta-analysis comparing open and arthroscopic surgery for treatment of anterior shoulder instability by analyzing comparative studies during 2 different time intervals during the last 20 years.

Methods: We conducted a systematic review of MEDLINE, Embase, Scopus, and Google Scholar. Two groups were created by dividing studies according to the year of publication, those published from 1995 to 2004 or from 2005 to 2015. Publication bias and risk of bias were assessed using the Cochrane Collaboration’s tools. Heterogeneity was assessed using the I² statistics.

Results: A total of 22 studies (n = 1633) met the eligibility criteria. Comparison of the pooled estimate for all of these studies demonstrated no significant differences (P = .64) in clinical outcomes between open and arthroscopic shoulder stabilization. However, studies published from 1995 through 2004 demonstrated significant differences (P = .015) in recurrence rates favoring open surgery. In contrast, no significant differences (P = .09) in recurrence rates were observed for studies published from 2005 through 2015. The pooled estimate for all studies in both groups demonstrated significant differences (P = .001) in external rotation deficits between open and arthroscopic shoulder stabilization favoring arthroscopic surgery.

Conclusion: Despite advances in surgical techniques and devices during the last 20 years, either open or arthroscopic surgical treatment of anterior shoulder dislocation results in similar clinical outcomes. The recurrence rate for arthroscopic surgical stabilization has only marginally decreased, from 16.8% to 14.2%. However, during the earlier decade from 1995 through 2004, patients treated with arthroscopic surgery had twice the risk of recurrence compared with an open procedure.

Putting 3D Modelling and 3D Printing into Practice: Virtual surgery and Preoperative Planning to Reconstruct Complex Post-Traumatic Skeletal Deformities and Defects

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3WEB Medical, Frisco, TX 75033, USA
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Abstract

3D printing technology has revolutionized and gradually transformed manufacturing across a broad spectrum of industries, including healthcare. Nowhere is this more apparent than in orthopaedics with many surgeons already incorporating aspects of 3D modelling and virtual procedures into their routine clinical practice. As a more extreme application, patient-specific 3D printed titanium truss cages represent a novel approach for managing the challenge of segmental bone defects. This review illustrates the potential indications of this innovative technique using 3D printed titanium truss cages in conjunction with the Masquelet technique. These implants are custom designed during a virtual surgical planning session with the combined input of an orthopaedic surgeon, an orthopaedic engineering professional and biomedical design engineer. The ability to 3D model an identical replica of the original intact bone in a virtual procedure is of vital importance when attempting to precisely reconstruct normal anatomy during the actual procedure. Additionally, other important factors must be considered during the planning procedure, such as the three-dimensional configuration of the implant. Meticulous design is necessary to allow for successful implantation through the planned surgical exposure, while being aware of the constraints imposed by local anatomy and prior implants. This review will attempt to synthesize the current state of the art as well as discuss our personal experience using this promising technique. It will address implant design considerations including the mechanical, anatomical and functional aspects unique to each case.
Use of Google Scholar Public Profiles in Orthopedics: Rate of Growth and Changing International Patterns

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³Orthopaedic Research Centre of Australia (ORCA), Brisbane, Australia
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Abstract

Introduction: The purpose of this study was to survey the growth of Google Scholar public profiles in orthopedics over a 12-month period and to investigate global patterns.

Methods: Data was prospectively acquired from June 2013 to June 2014. Google Scholar queries specific to orthopedic surgery were performed at 90-day intervals. Demographic aspects of each user were also compiled, including gender, current location, and primary interests. To determine differences between the growth of Google Scholar public profile registrations and citation counts, as well as differences in growth in different regions, repeated measures of analysis of variance (RMANOVA) were used.

Results: RMANOVA revealed statistically significant differences (p = 0.0001) for regional growth. The largest growth was observed in the United Kingdom (p = 0.009, 289%), followed by the Asia-Pacific region (p = 0.004, 177%) and “Other” (p = 0.006, 172%). The mean growth per 90-day interval is 19.9% (p = 0.003) and the mean 12-month growth is 107% (p = 0.05). Statistically significant differences between gender (male vs. female) and basic and clinical sciences ($X^2 = 22.4, p = 0.0001$) were observed.

Conclusion: This study suggests an exponential growth in the number of authors in the field of orthopedic surgery creating a Google Scholar public profile, and at the current rate participation doubles every 10.6 months.

Bone Transport Versus Acute Shortening for the Management of Infected Tibial Non-Unions with Bone Defects

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Abstract

Introduction: This study compared bone transport to acute shortening/lengthening in a series of infected tibial segmental defects for infected tibial non-union.

Methods: In a retrospective comparative study 42 patients treated for infected tibial non-union with segmental bone loss measuring between 3 and 10 cm were included. Group A was treated with bone transport and Group B with acute shortening/lengthening. All patients were treated by Ilizarov methods for gradual correction as bi-focal or tri-focal treatment; the treating surgeon selected either transport or acute shortening based on clinical considerations. The principle outcome measure was the external fixation index (EFI); secondary outcome measures included functional and bone results, and complication rates.

Results: The mean size of the bone defect was 7 cm in Group A, and 5.8 cm in Group B. The mean time in external fixation in Group A was 12.5 months, and in Group B was 10.1 months. The external fixation index (EFI) measured 1.8 months/cm in Group A and 1.7 months/cm in Group B. Minor complications were 1.2 per patient in the transport group and 0.5 per patient in the acute shortening group (P = 0.00001). Major complications were 1.0 per patient in the transport group versus 0.4 per patient in the acute shortening group (P = 0.0002). Complications with permanent residual effects (sequelae) were 0.5 per patient in the transport group versus 0.3 per patient in the acute shortening group (P = 0.28).

Conclusions: While both techniques demonstrated excellent results, acute shortening/lengthening demonstrated a lower rate of complications and a slightly better radiographic outcome. Bone grafting of the docking site was often required with both procedures.

Dry Arthroscopic Excision of Dorsal Wrist Ganglion

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Abstract

Ganglions are common soft tissue masses of the hand. High recurrence rates are associated with nonsurgical treatment; thus, excision is often indicated. Arthroscopic excision and open excision have similar recurrence rates; however, the latter is associated with prolonged healing time and increased scarring. Recently, dry wrist arthroscopic techniques have been used. This technique allows easier confirmation of complete ganglion removal, easier conversion to open surgery, earlier return of motion, and stitch-less closure when compared with traditional “wet” arthroscopic excision.

American Orthopaedic Surgeons in World War I

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Abstract

On April 6, 1917, the United States declared war on Germany and entered what was then called the Great War. Among the first officers sent to Europe were 21 orthopaedic surgeons in the so-called First Goldthwait Unit. Prior to the war, orthopaedics had been a nonoperative “strap-and-buckle” specialty that dealt primarily with infections, congenital abnormalities, and posttraumatic deformity. The Great War changed all of that forever, creating a new surgical specialty with emphasis on acute treatment, prevention of deformity, restoration of function, and rehabilitation.

Femoral Neck Stress Fractures in Children Younger Than 10 Years of Age

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Abstract

Background: Femoral neck stress fractures are rare in healthy children, with only 9 cases previously reported. The present article reviews our institutional experience with femoral neck stress fractures in children younger than 10 years of age, to highlight the unique features of this condition.

Methods: We undertook a retrospective review of clinical records of patients who had been treated at our institution for an idiopathic femoral neck stress fracture between 2000 and 2014. To focus on children rather than adolescents, the World Health Organization's definition of adolescent as a person between 10 and 19 years of age was used; we thereby limited our analysis to patients younger than 10 years of age.

Results: The study included 6 patients (3 males, 3 females) treated for an idiopathic femoral neck stress fracture, with a mean age at diagnosis of 7.7 years (range, 5.2 to 8.9 y). All patients presented with a limp, which worsened with activity and had persisted for a mean of 5 weeks (range, 2 to 9 wk). None of the patients had experienced an increase in activity level or sporting volume before symptom onset. On examination, 3 patients experienced pain with terminal hip flexion and 3 patients demonstrated pain-free hip range of motion. Plain radiography demonstrated inferior femoral neck cortical disruption, suggesting a compression-type stress fracture mechanism. The diagnosis was confirmed by cross-sectional imaging in all cases. All patients were initially treated with 6 to 8 weeks of non-weight-bearing followed by 4 to 6 weeks of partial weight-bearing, leading to complete healing in 4 patients. Two patients demonstrated incomplete healing and were managed with spica casting for an additional 6 weeks.

Conclusions: Our case series illustrates the unique features of this rare condition in children, with a history and examination profile distinct from those of adolescents and adults. Compliance with weight-bearing restrictions is difficult in this population and hip spica casting may be required to permit complete healing.
The Burden of Gunshot Injuries on Orthopaedic Healthcare Resources in South Africa

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Abstract

Background: Injuries inflicted by gunshot wounds (GSWs) are an immense burden on the South African (SA) healthcare system. In 2005, Allard and Burch estimated SA state hospitals treated approximately 127 000 firearm victims annually and concluded that the cost of treating an abdominal GSW was approximately USD1 467 per patient. While the annual number of GSW injuries has decreased over the past decade, an estimated 54 870 firearm-related injuries occurred in SA in 2012. No study has estimated the burden of these GSWs from an orthopaedic perspective.

Objective: To estimate the burden and average cost of treating GSW victims requiring orthopaedic interventions in an SA tertiary level hospital.

Methods: This retrospective study surveyed more than 1 500 orthopaedic admissions over a 12-month period (2012) at Groote Schuur Hospital, Cape Town, SA. Chart review subsequently yielded data that allowed analysis of cost, theatre time, number and type of implants, duration of admission, diagnostic imaging studies performed, blood products used, laboratory studies ordered and medications administered.

Results: A total of 111 patients with an average age of 28 years (range 13 – 74) were identified. Each patient was hit by an average of 1.69 bullets (range 1 – 7). These patients sustained a total of 147 fractures, the majority in the lower extremities. Ninety-five patients received surgical treatment for a total of 135 procedures, with a cumulative surgical theatre time of >306 hours. Theatre costs, excluding implants, were in excess of USD94 490. Eighty of the patients received a total of 99 implants during surgery, which raised theatre costs an additional USD53 381 cumulatively, or USD667 per patient. Patients remained hospitalised for an average of 9.75 days, and total ward costs exceeded USD130 400. Individual patient costs averaged about USD2 940 (ZAR24 945) per patient.

Conclusion: This study assessed the burden of orthopaedic firearm injuries in SA. It was estimated that on average, treating an orthopaedic GSW patient cost USD2 940, used just over 3 hours of theatre time per operation, and necessitated a hospital bed for an average period of 9.75 days. Improved understanding of the high incidence of orthopaedic GSWs treated in an SA tertiary care trauma centre and the costs incurred will help the state healthcare system better prioritise orthopaedic trauma funding and training opportunities, while also supporting cost-saving measures, including redirection of financial resources to primary prevention initiatives.

Gunshot Tibia Fractures Treated with Intramedullary Nailing: A Single Centre Retrospective Review

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Abstract

Background: Open tibia fractures are notoriously difficult to treat, with a high rate of union problems and infection. Gunshot wound-associated fractures of the tibia compound these issues further by causing extensive bone comminution and soft tissue damage. No universally accepted management protocol exists, but intramedullary (IM) nailing of these injuries is an attractive treatment strategy. It provides stable internal fixation and limits further insult to the soft tissue envelope. It also allows complete access for wound management and early range of movement of the adjacent joints. This study aims to review the results of patients treated with IM nailing for gunshot wound (GSW) tibia fractures to assess whether this is a viable treatment option for this injury.

Methods: A retrospective folder review was performed of all adult patients who sustained a GSW tibia fracture treated with intramedullary nailing between January 2009 and December 2014. Parameters evaluated included time to theatre, time to wound closure, radiographic extent of fracture comminution, anatomical alignment, time to union and incidence of chronic osteomyelitis.

Results: Twenty-two patients were eligible for inclusion; however, nine were lost to follow-up. The remaining 13 patients achieved union over an average of 26 weeks. Three cases developed osteomyelitis, all of which had radiographic zones of comminution exceeding 120 mm. No cases of malunion were reported and no other significant trends noted.

Conclusion: Treatment of tibial gunshot fractures must be individualised according to both the soft issue injury and radiographic zone of comminution in order to achieve a favourable outcome. Intramedullary nailing is an effective treatment strategy for low Gustilo-Anderson grade injuries, with minimal complications.

Postoperative Rehabilitation of Low Energy Hip Fractures in the Elderly

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Abstract

Evidence-based information, in conjunction with the clinical expertise of physicians, was used to develop the Appropriate Use Criteria (AUC) document Postoperative Rehabilitation of Low Energy Hip Fractures in the Elderly to improve patient care and obtain the best outcomes while considering the subtleties and distinctions necessary in making clinical decisions. The AUC clinical patient scenarios were derived from patient indications that typically accompany hip fractures, as well as from current evidence-based clinical practice guidelines and supporting literature. The 72 patient scenarios and 10 treatments were developed by the Writing Panel, a group of clinicians who are specialists in this AUC topic. A separate, multidisciplinary Voting Panel made up of specialists and nonspecialists rated the appropriateness of treatment of each patient scenario using a 9-point scale to designate a treatment as Appropriate (median rating, 7 to 9), May Be Appropriate (median rating, 4 to 6), or Rarely Appropriate (median rating, 1 to 3).

Treatment of Hip Fractures in the Elderly

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Abstract

Evidence-based information, in conjunction with the clinical expertise of physicians, was used to develop the Appropriate Use Criteria (AUC) document Treatment of Hip Fractures in the Elderly to improve patient care and obtain optimal outcomes while considering the subtleties and distinctions necessary in making clinical decisions. The AUC clinical patient scenarios were derived from indications typical of patients commonly presenting with hip fractures in clinical practice, as well as from current evidence-based clinical practice guidelines and supporting literature. The 30 patient scenarios and 6 treatments were developed by the Writing Panel, a group of clinicians who are specialists in this AUC topic. A separate, multidisciplinary Voting Panel made up of specialists and nonspecialists rated the appropriateness of treatment of each patient scenario using a 9-point scale to designate a treatment as Appropriate (mean rating, 7 to 9), May Be Appropriate (median rating, 4 to 6), or Rarely Appropriate (median rating, 1 to 3).
Management of Patients with Orthopaedic Implants Undergoing Dental Procedures

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Abstract

The American Academy of Orthopaedic Surgeons, in collaboration with the American Dental Association, has developed Appropriate Use Criteria (AUC) for the Management of Patients with Orthopaedic Implants Undergoing Dental Procedures. Evidence-based information, in conjunction with the clinical expertise of physicians, was used to develop the criteria to improve patient care and obtain best outcomes while considering the subtleties and distinctions necessary in making clinical decisions. The Management of Patients with Orthopaedic Implants Undergoing Dental Procedures AUC clinical patient scenarios were derived from indications of patients with orthopaedic implants presenting for dental procedures, as well as from current evidence-based clinical practice guidelines and supporting literature to identify the appropriateness of the use of prophylactic antibiotics. The 64 patient scenarios and 1 treatment were developed by the writing panel, a group of clinicians who are specialists in this AUC topic. Next, a separate, multidisciplinary, voting panel (made up of specialists and nonspecialists) rated the appropriateness of treatment of each patient scenario using a 9-point scale to designate a treatment as Appropriate (median rating, 7 to 9), May Be Appropriate (median rating, 4 to 6), or Rarely Appropriate (median rating, 1 to 3).
Complications of Shoulder Arthroplasty

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Abstract

The most common complications after reverse shoulder arthroplasty in order of decreasing frequency included instability, periprosthetic fracture, infection, component loosening, neural injury, acromial and/or scapular spine fracture, hematoma, deltoid injury, rotator cuff tear, and venous thromboembolism (VTE).

The most common complications after anatomic total shoulder arthroplasty (TSA) in order of decreasing frequency were component loosening, glenoid wear, instability, rotator cuff tear, periprosthetic fracture, neural injury, infection, hematoma, deltoid injury, and VTE.

Glenoid component wear and loosening remain a common cause of failure after anatomic TSA, despite advances in surgical technique and implant design.

Diagnostic confirmation of infection after shoulder arthroplasty remains a challenge. In the setting of a painful and stiff shoulder after arthroplasty, the surgeon should have a heightened suspicion for infection. Inflammatory markers may be normal, radiographs may be inconclusive, and prosthetic joint aspiration may be negative for a causative organism.

Radiographic Results of Augmented All-Polyethylene Glenoids in the Presence of Posterior Glenoid Bone Loss During Total Shoulder Arthroplasty

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Abstract

Background: Chronic osteoarthritis can result in glenohumeral subluxation and loss of posterior glenoid bone. This can alter normal glenohumeral biomechanics and affect the stress placed on the glenoid implant after total shoulder arthroplasty. This study evaluated the clinical and radiographic results of an augmented all-polyethylene glenoid for the treatment of glenoid osteoarthritis in the presence of posterior glenoid bone loss and determined whether any failures or complications occurred with short-term follow-up.

Methods: During a 2-year period, 21 patients were treated with an augmented glenoid for an index diagnosis of osteoarthritis with a biconcave glenoid and average posterior glenoid bone loss of 4.7 mm. Clinical outcomes were recorded for the American Shoulder and Elbow Surgeons Shoulder Assessment, Simple Shoulder Test, and active motion. Radiographic analysis included glenoid version, humeral head subluxation, component seating, ingrowth, and loosening.

Results: Significant improvements were demonstrated for American Shoulder and Elbow Surgeons Shoulder Assessment (52.3), Simple Shoulder Test (8.1), forward flexion (50°), external rotation (32°), and pain. Radiographic improvements were found for glenoid version (12°), humeral scapular alignment (23%), and humeral glenoid alignment (8%). Central peg ingrowth was demonstrated in all patients, and complete component seating was achieved in 19 patients. No complications were encountered, and no clinical or radiographic failures were identified.

Conclusion: Augmented polyethylene glenoid components demonstrated improved clinical outcome, without implant failure or complications, during short-term follow-up.

Intramedullary Nailing of Tibial Shaft Fractures in the Semi-Extended Position Using a Suprapatellar Portal Technique

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Abstract

Intramedullary nail fixation remains the standard treatment for displaced tibial shaft fractures. Establishing an appropriate starting point remains a crucial step in the surgical procedure. Tibial nailing using an infrapatellar starting point with the knee flexed over a radiolucent triangle has been established as a widely-used standard technique. Tibial nail insertion with the knee in the semi-extended position was introduced with the goal to counteract post-operative procurvatum deformities that frequently have been reported as a common problem in proximal third tibial shaft fractures. Early reports on tibial nailing in the semi-extended position used a knee arthotomy in order to establish the proximal tibial starting point. Recent technological advances have provided the surgical community with instrumentation systems that allow for tibial nailing in the semi-extended position using a suprapatellar portal with nail insertion through the patellofemoral joint. Preliminary clinical studies have suggested favorable outcomes that can be achieved with this technique. This article provides a description of the surgical technique and a review of the currently available evidence.

Primary Posterior Blade Plate Tibiotalar Arthrodesis: A Salvage Procedure for Complex Nonreconstructable Pilon Fractures

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Abstract

A subset of C2/C3 pilon fractures, open pilon injuries, metaphyseal bone comminution, and those involving substantial soft tissue or vascular injury may be nonreconstructable. Such injuries are at risk of progress to nonunion and failing open reduction internal fixation (ORIF). The risk of injection, malunion, and nonunion is relatively high with such injury patterns. In such cases, tibiotalar arthrodesis is performed after ORIF fails as a salvage procedure. Overall, the literature agrees that all pilon fractures will develop posttraumatic osteoarthritis, and these patients are ultimately treated with an arthrodesis or in narrow population with total ankle arthroplasty. Given these combined findings, it follows that patients identified as high risk of failing ORIF could benefit from the use of primary arthrodesis. The proposed technique provides a reliable approach designed to achieve ankle fusion. It provides a means to achieve reliable union rates and spares the subtalar joint. In addition, it avoids the anterior soft tissue envelope, and hardware irritation is tempered as the final implants are covered by a muscular layer. Last, patients who are at higher risk of failing ORIF are selected and spared, having to undergo trial ORIF, time to nonunion, work absence, and rehab.

Long-Term Outcome in 324 Polytrauma Patients: What Factors Are Associated with Posttraumatic Stress Disorder and Depressive Disorder Symptoms?

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Abstract

Background: Physical impairment is well-known to last for many years after a severe injury, and there is a high impact on the quality of the survivor's life. The purpose of this study was to examine if this is also true for psychological impairment with symptoms of posttraumatic stress disorder or depression after polytrauma.

Design: Retrospective cohort outcome study.

Setting: Level I trauma centre.

Population: 637 polytrauma trauma patients who were treated at our Level I trauma centre between 1973 and 1990. Minimum follow-up was 10 years after the injury.

Methods: Patients were asked to fill in a questionnaire, including parts of the Posttraumatic Stress Diagnostic Scale, the Impact of Event Scale-Revised and the German Hospital Anxiety and Depression Scale, to evaluate mental health. Clinical outcome was assessed before by standardised scores.

Results: Three hundred and twenty-four questionnaires were evaluated. One hundred and forty-nine (45.9%) patients presented with symptoms of mental impairment. Quality of life was significantly higher in the mentally healthy group, while the impaired group achieved a lower rehabilitation status.

Conclusions: Mental impairment can be found in multiple trauma victims, even after 10 years or more. Treating physicians should not only focus on early physical rehabilitation but also focus on early mental rehabilitation to prevent long-term problems in both physical and mental disability.

Spanish Translation, Cross-Cultural Adaptation, and Validation of the American Academy of Orthopaedic Surgeons Foot and Ankle Outcomes Questionnaire in Mexican-Americans with Traumatic Foot and Ankle Injuries

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Abstract

Background: Hispanics represent the largest minority group within the US population accounting for an estimated 55.4 million individuals. Enrolling Hispanics into clinical outcome studies is important in order for study populations to be externally valid and representative of the US population. Inclusion of Mexican-Americans in clinical studies is frequently limited by the lack of validated outcome measures. The goal of this study was to validate a Spanish version of the American Academy of Orthopaedic Surgeons Foot and Ankle Outcomes Questionnaire (AAOS-FAOQ) in Mexican-Americans with traumatic foot and ankle injuries.

Methods: The translation and cross-cultural adaptation procedure was performed by a committee of bilingual speakers using the following steps: (1) forward translation and adaptation, (2) synthesis, (3) back translation, (4) committee review, and (5) pilot testing. The validation was performed in 100 Mexican-Americans with traumatic foot and ankle injuries.

Results: A total of 41 females and 59 males were enrolled in this study. The mean age was 42.98 years (range 18-88). The Spanish version of the Global Foot and Ankle Scale of the AAOS-FAOQ showed statistically significant correlations with all 8 subscales of the Spanish SF-36 as well as the Physical Component Summary scale and the Mental Component Summary scale (P < 0.05). The Global Foot and Ankle scale of the Spanish AAOS-FAOQ demonstrated a test-retest reliability of 0.68.

Conclusion: We provide a Spanish translation and cross-cultural adaptation of the AAOS-FAOQ. The instrument demonstrates appropriate psychometric properties in Mexican-Americans with traumatic foot and ankle injuries.

Injuries to the Upper Extremities in Polytrauma: Limited Effect on Outcome More than Ten Years after Injury – A Cohort Study in 629 Patients

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Abstract

Aims: To analyse the influence of upper extremity trauma on the long-term outcome of polytraumatised patients.

Patients and Methods: A total of 629 multiply injured patients were included in a follow-up study at least ten years after injury (mean age 26.5, standard deviation 12.4). The extent of the patients’ injury was classified using the Injury Severity Score. Outcome was measured using the Hannover Score for Polytrauma Outcome (HASPOC), Short Form (SF)-12, rehabilitation duration, and employment status. Outcomes for patients with and without a fracture of the upper extremity were compared and analysed with regard to specific fracture regions and any additional brachial plexus lesion.

Results: In all, 307 multiply-injured patients with and 322 without upper extremity injuries were included in the study. The groups with and without upper limb injuries were similar with respect to demographic data and injury pattern, except for midface trauma. There were no significant differences in the long-term outcome. In patients with brachial plexus lesions there were significantly more who were unemployed, required greater retraining and a worse HASPOC.

Conclusion: Injuries to the upper extremities seem to have limited effect on long-term outcome in patients with polytrauma, as long as no injury was caused to the brachial plexus.
Ethic Differences in Patients’ Perceptions Towards Isolated Orthopedic Injuries: A Pilot Study

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Abstract

Background: Patients’ perceptions of their healthcare have been reported to influence clinical outcomes following orthopedic trauma. Findings across clinical outcomes have demonstrated significant differences in perceptions towards healthcare between Hispanics and non-Hispanic whites. However, ethnic disparities in perceptions towards orthopedic injuries have not been examined in the literature.

Aim of Study: The aim of this pilot study is to explore whether Hispanic patients with isolated orthopedic injuries will demonstrate different perceptions towards their injury as compared to non-Hispanic white patients. The pilot data will be used to inform a subsequent larger clinical investigation and interventional study.

Methods: A total of 43 patients (31 Hispanics and 12 non-Hispanic whites) with isolated orthopedic injuries requiring surgical treatment were enrolled in this cross-sectional observational pilot study. Outcome measures included the Questionnaire of Perceived Injustice (QPI), Short-Form 36 Health Survey (SF-36v2), Pain Catastrophizing Scale, and Consumer Assessment of Healthcare Providers and Systems (CAHPS) Cultural Competence (CC) item set.

Results: The CAHPS was completed by 34 patients, and the remaining scoring systems were completed by all 43 subjects enrolled in this study. Hispanic patients trended towards higher QPI scores indicating poorer outcomes than non-Hispanic whites (mean difference [MD] 5.4, 95%; confidence interval [CI] -4.4, 15.2). The mental component summary score of the SF-36 trended lower in Hispanics as compared to non-Hispanic white (MD -6.8, 95%; CI -15.0, 1.4). Hispanic patients also expressed less trust in their doctor on a scale from 0 to 10 (MD -1.0, 95%; CI -1.9, -0.1).

Conclusions: Our study suggests ethnic differences in patients’ perceptions towards isolated orthopedic injuries. These results must be interpreted cautiously given the limited number of subjects in this pilot examination. We collected sufficient data to allow a sample size calculation for a subsequent larger clinical investigation. Future clinical investigations may determine the influence of ethnic differences in patients’ perceptions towards orthopedic injuries, identify their impact on the functional outcomes, and establish intervention strategies.

Publication Productivity of Orthopaedic Surgery Chairs

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Abstract

Background: As academic leaders, orthopaedic chairs represent role models for scholarly activities. Despite the importance of journal publications as a measure of scholarly activity, data on the publication productivity of orthopaedic chairs remain limited. The goals of this study were to record the publication productivity of orthopaedic chairs and evaluate the extent to which they maintained their scholarly activity while serving as chairs.

Methods: The chairs of all orthopaedic residency programs in the United States were identified through the Accreditation Council for Graduate Medical Education (ACGME) web site, and were confirmed by information found on the web site of each orthopaedic program that was included in the study. University and non-university chairs were defined based on affiliation of the program with a medical school. The publication records of the program chairs were retrieved through the Scopus database.

Results: During the 7 years prior to their appointment to chair, the mean number of total publications was significantly higher for university chairs (n = 58.6, range 0 to 217) than for non-university chairs (n = 29.1, range 0 to 13) (p = 0.003). The mean number of publications per year during the 7 years leading up to the chair position was 4.66 (range, 0 to 25) for the university chairs, and 2.29 (range, 0 to 10.9) for the non-university group (p = 0.02). While serving as chair, the mean number of publications per year significantly decreased among the university chairs to 3.75 (range, 0 to 32.8; p = 0.015), whereas no significant change was observed among non-university chairs. Both groups showed significant declines in first authorships while serving as chair. The mean percentage of first authorships was not significantly different between university and non-university chairs. Both groups showed significant declines in first authorships while serving as chair.

Conclusions: At the time of becoming chair, the average university chair had published approximately 60 manuscripts, whereas the average non-university chair had published approximately 30 manuscripts. While serving as chair, the number of publications per year significantly decreased for university chairs. Among all chairs, the percentage of first authorships significantly decreased while serving as chair.

Return to Sports After Multiple Trauma: Which Factors Are Responsible? – Results From a 17-Year Follow-Up

Christian D. Weber¹, Klemens Horst¹, Anthony R. Nguyen², Magdalena J. Bader¹, Christian Probst³, Boris Zelle⁴, Hans-Christoph Pape¹, & Thomas Dienstknecht¹

¹Department of Orthopaedics and Trauma, RWTH Aachen University Medical Center, Aachen, Germany
²Department of Orthopaedics and Trauma, Royal Adelaide Hospital, Adelaide, Australia
³Department of Trauma and Orthopedic Surgery, Cologne-Merheim Medical Center (CMMC), Private University of Witten/Herdecke, Cologne, Germany
⁴Department of Orthopaedics, Health Science Center, University of Texas, San Antonio, Texas

Abstract

Objective: We hypothesize that the majority of polytraumatised patients are unable to maintain their preinjury level of sporting activity, and that musculoskeletal injuries are a major contributing factor. We assessed the impact of such injuries on sporting prowess, with a focus on isolating, particularly debilitating musculoskeletal trauma.

Methods: We conducted a cohort study of 637 patients at a level 1 trauma centre, to assess the long-term outcome of severe trauma on return to sporting activities (RTS). Data collated on the multiply injured patient included preinjury physical activity, standardized outcome scores (SF-12, GOS, HASPOC), and clinical follow-up of at least 10 years duration. The return to preinjury sports participation was defined as a primary outcome parameter. Regression analyses were performed to identify specific injuries interfering with the RTS.

Study Design: Prognostic study; Level of evidence II.

Results: Mean follow-up was 17 ± 5 years. We included 465 patients, including 207 athletic and 258 nonathletic individuals. Mean age at the time of injury was 26 ± 11.5 years and injury severity was comparable between the 2 cohorts. The deleterious effects on quality of life and the total duration of the rehabilitation process were also similar in athletes and nonathletes. Athletes were more likely to be unable to return to preinjury activities, or to return to a lower level of sporting prowess posttrauma. We identified knee injuries as the type of musculoskeletal trauma most likely to be career ending for the athlete (odds ratio 3.4, 95% confidence interval, 1.4-8.3; P = 0.008).

Conclusion: Our results demonstrate an enforced shift from high-impact and team sports to low-impact activities after multiple trauma. Injuries of the lower extremities, especially around the knee joint, seem to have the highest lifechanging potential, preventing individuals from returning to their previous sporting activities.
BASIC SCIENCE RESEARCH UPDATE

Vaida Glatt, PhD

Dr. Vaida Glatt, PhD, is an assistant professor and the Director of Basic Science Research for the Department of Orthopaedic Surgery at the University of Texas Health Science Center San Antonio. Her background is in biomedical engineering and medical science, and during her 10-year career Dr. Glatt has had the opportunity to conduct musculoskeletal research at the Center for Advanced Orthopaedic Studies, Harvard Medical School (Boston, USA), Julius Wolff Institut (Berlin, Germany), and the Institute of Health and Biomedical Innovation at Queensland University of Technology (Brisbane, Australia). She has actively collaborated with researchers and clinicians locally and across the globe, fostering relationships that generate synergistic approaches to help solve interdisciplinary research solutions. Dr. Glatt joined the department in 2016, with a primary interest in translational research to develop novel strategies for the treatment and regeneration of musculoskeletal tissues. Her major focus has been in mechano-biology, which is the study of the interactions between mechanical and biological factors, to better explain the influence of mechanical conditions on bone healing. She was the first to describe the process of Reverse Dynamization, a counter intuitive method to accelerate fracture healing that runs contrary to what has been done in prior experimental and clinical studies.

Dr. Glatt has made numerous contributions to the orthopaedic literature as an author, a reviewer and editor for orthopaedic journals, reviewer of grant applications, an invited speaker and lecturer, and has presented her work at over 40 national and international conferences. She is an author of more than 50 publications in peer-reviewed journals – 13 of which were published in 2017, a contributing book author, and as an early career academic has been successful in attracting research income from the AO Foundation (Switzerland), Department of Defense (USA), the Vice-Chancellor’s Research Fellowship (Australia), the Australian Orthopaedic Association, and the Deutsche Forschungsgemeinschaft (Germany), the equivalent to the NIH grant system in the USA.

Dr. Glatt’s research team is currently involved in research projects combining both engineering and biological approaches to develop novel treatment strategies for the regeneration and repair of bone and cartilage. Currently, her team consists of post-doctoral fellow Anna Woloszyk, PhD, resident Andrew Haus, MD, medical student Abraham Ifeoluwapo Bankole, and research assistant Bridney Lundquist, BS. Dr. Glatt is in the process of expanding the team by hiring another post-doctoral fellow and a research assistant to investigate cartilage. In 2017, Dr. Anna Woloszyk was awarded a post-doctoral mobility grant from the Swiss National Science Foundation to investigate the influence of the structural properties of fracture hematoma, and the affect it has on fracture healing. Dr. Glatt’s research team is also currently working to regenerate cartilage tissue through mechanical stimulation. She currently holds two grants from the AO
Foundation (Switzerland), as a principal investigator, where she is studying the interactions between the local mechanical environment and biological factors to determine how this effects bone regeneration and repair, and as a co-investigator, Dr. Glatt is interested in the influence of local immune-suppression upon the healing of large bone defects. Moreover, her team is collaborating with Kevin Tetsworth, MD FRACS (Australia), who is an expert in limb salvage and reconstruction, to improve the treatment of massive long bone defects using 3D printed patient-specific titanium cages, while exploring the biologic activity of Masquelet membranes as an aide to healing large bone defects. Furthermore, Dr. Glatt is actively involved in resident research and education to foster the development of a new generation of researchers, and is in the process of establishing a pathway for new investigators to gain the experience needed to write manuscripts and to secure grant funding.
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The Alamo Orthopaedic Society was established in 1972 by Dr. Charles Rockwood, Jr. as the official alumni association for the Department of Orthopaedics at UTHSCSA. The establishment of Orthopaedics at UTHSCSA pre-dated the actual opening of the school by two years when Dr. Rockwood was recruited to establish an orthopaedic program in 1966. The alumni association celebrated this 50th anniversary of this historic occasion at the Eilan hotel in San Antonio as part of our biennial meeting. Dr. David Teuscher, the immediate past president of the AAOS was our guest speaker and as such is now an honorary member. Dr. Gerald Williams became the first graduate of this program to serve as President and joins Drs. Hinchey, Rockwood, Heckman and Morrey as past AAOS Presidents that have been associated with the program. It was a terrific event and over 50 alumni returned for this event. The association continues to hold annual receptions at the AAOS, and this year is no exception. The 2018 AAOS reception was held at Arnaud’s in New Orleans with a terrific turnout. Although, the 2016 biennial meeting was one year late in an effort to celebrate our 50th, the society is back to every other year timetable with our meeting this year at the newly renovated La Cantera resort on April 26th-29th, 2018.

We hope many of you will be able to join us. The society remains strong with over 100 active members, but this is only a fraction of the over 290 alumni that have graduated this program. I urge many of you that may have let your membership expire to renew and re-engage with the society and the department. Donald Davis (Class of 1977) serves as President of the society, Animesh Agarwal (Class of 1997) serves as Secretary/Treasurer, and Anna Conti continues to serve as the administrator for the society.
ORTHOPAEDIC SURGERY ALUMNI BY CLASS

As of September 15, 2017

Class of 1971
Robert D. Bilderback
Michael V. Galo
Thomas R. Reid
Robert G. Stone
Hilario Trevino
Ray M. Fitzgerald
John A. Richards

Class of 1972
Juan J. Capello
Gary N. Pamplin
Vernon L. Ryan
James M. Steel
Joe W. Tippett
Richard P. Wilson
Edward D. Campbell, Jr.
Ralph D. Cash
Warren W. Kendall
John T. Phillips
Rafael V. Urrutia, Jr.
Charles M. Younger

Class of 1973
Edward D. Campbell, Jr.
Ralph D. Cash
Warren W. Kendall
John T. Phillips
Rafael V. Urrutia, Jr.
Charles M. Younger

Class of 1974
John R. Anderson
George N. Armstrong, Jr.
John E. Blattman
William A. Graham
William H. Matthews
Richard W. Williamson, Jr.

Class of 1975
James W. Adams
Jesse C. DeLee
John A. Genung
Glenn C. Terry

Class of 1976
Billy E. Allison
Robert K. Blair
Jack W. Crosland, III

Class of 1977
C. Robert Boone
Phillip R. Craven
Donald R. Davis
Jerold N. Friesen
Raymond S. Gruby
James E. Keever

Class of 1978
William M. Allen, Jr.
Kenneth P. Butters
Fred G. Corley, Jr.
Donald C. Jones
Randi J. Pollet
Archie K. Whittemore

Class of 1979
Ray A. Fambrough
Howard G. Miller
C. Bart Norton
William E. Sanders
Wilburn A. Smith, Jr.
R. Fred Torstrick

Class of 1980
Michael B. Clendenin
Charles E. Lewis
Peter L. J. McGanity
Wayne L. McLemore
James B. Stiehl
John (Jack) M. Thomas, Jr.

Class of 1981
Thomas O. Clanton
Gary H. Jackson
Allen S. Kent
Robert B. Kimmel
Michael R. McLean

Class of 1982
Jonathan P. Bacon
Steven C. Dickhaut
Donald W. Floyd
James L. Griffin
Walter M. Knight
Joe B. Wilkinson

Class of 1983
George S. Edwards, Jr.
James B. Giles
Alan G. Lewis
Edward C. Liu
Mark B. Riley
Elizabeth A. Szalay

Class of 1984
Stephen E. Earle
Gary P. Goodfried
Theodore T. Peters
G. Steven White

Class of 1985
Carey C. Alkire
Hal S. Crane
Ralph J. Curtis, Jr.
Michael L. McCarty
Robert E. Mitchell
David R. Schmidt

Class of 1986
Eric C. Carlson
Jeffrey T. DeHaan
Phillip M. Graehl
Michael J. Hanley
Scott H. Kitchel
Matthew C. Reckmeyer

Class of 1987
Jon T. Abbott
Daniel K. Guy
Stephen M. McCollam
Daniel G. Nelson
Jacob F. Patterson
Rex E. Wilcox

Class of 1988
Ples L. Kujawa
James M. Odor
John C. Pearce
Pat A. Peters
Ronald E. Talbert
Donald R. Watson

Class of 1989
Donna M. Boehme
Jimmy H. Conway
Daniel E. Cooper
Stewart M. Dean
Gerald R. Williams

Class of 1990
Jerry A. Benham
Gary T. Brock
Daniel F. Craviotto, Jr.
Kerry M. Donegan
Kurt J. Kitziger
Michael A. Wirth

Class of 1991
Joseph W. Clark
Frank J. Garcia
Carolyn M. Hyde
David E. Nonweiler
James O. Sanders
John C. Sparks, Jr.
Daniel C. Valdez
Class of 1992
Robert L. Burke
N. Thomas Carstens
Mark S. Failinger
Manuel E. Molina
Keith J. Odegard
Barry L. Veazey

Class of 1993
Jerry L. Followwill
Michael G. McNamara
Praveen K. Reddy
Francisco J. Rodriguez, Jr.
Mark J. Rosen

Class of 1994
Keith D. Bjork
Mario A. Bustamante-Montes, Jr.
Kathryn A. Caulfield
Robert W. Dennis
Eduardo Gomez
Dean N. Walker

Class of 1995
John W. Gardemal
Christopher K. Hersh
John W.P. Horan
Todd C. Johnson
James M. Lovelace
Tommy L. McMillion
Joseph O. Muscat

Class of 1996
Bradley J. Broussard
Robert E. Carlson
Jon M. Goodnight
Randall R. Hardison
Sanjay Misra

Class of 1997
Animesh Agarwal
Theresa L. Colosi
James P. Flanagan
Dale A. Funk
Miguel A. Hernandez, III
Philip M. Jacobs
Ian S. Kovach

Class of 1998
Neil B. Callister
Mark A. Foreman
Melinda D. Garcia
Matthew P. Simonich
Steven J. Wilson
Robert S. Wolf

Class of 1999
Andrea J. Barrett
G. Troy Birk
David J. Clare
Jeffery W. Meincke-Reza
Brian E. Schulze
Thomas C. Young

Class of 2000
Eric A. Eifler
R. Thane Morgan
John Q. Smith
Robert A. Ward
Geroge N. Zoys

Class of 2001
Lance R. Farnworth
John D. Foote
Gary A. Go
Joseph J. Iero
Keith W. Lawson
Charles F. Mess
Jeffrey R. Schlimmer

Class of 2002
David M. Burt
P. Douglas deHoll
Patrick J. Miller
Alexander S. Rowland
Gregory W. Smith
David A. Hester
Keith R. Johnson
R. Bradley Ray
J. David Schillen
Vudhi V. Slabisak

Class of 2003
Jorge E. Casas-Ganem
William H. Hadnott, III

Class of 2004
Armin Afsar-Keshmiri
Gordon R. Bozarth
Mitchell W. Larsen
James M. Mahalek
Jeffrey B. Phelps
Stacé S. Rust

Class of 2005
Brett C. Anderson
Daniel L. Boyd
Ramon A.C. Esteban
Geoffrey M. Millican
Brian T. Rose
Ian C. Weber

Class of 2006
Matthew S. Grunkemeyer
Brandon R. Horne
Hank L. Hutchinson
Russell C. McKissick

Class of 2007
Doug S. Clouse
Gregory D. Gordon, Jr.
Florian G. Huber
William K. Koeck
Edwin C. Newman, III
Erik V. Nott

Class of 2008
Brent M. Adcox
Stephanie H. Alford
Cody N. Anderson
Jerome M. Benavides
Emeka O. Ofobike, Jr.
Anup A. Shah
Eric M. Stehly

Class of 2009
Jamey W. Burrow
John Paul S. Elton
Ravi A. Karia
Abilio A. Reis
Patrick W. Sander
Brandon A. Tinkler

Class of 2010
Matthew C. Murray
Arthur L. Strahan
Ryan B. Thomas
Hussein W. Turki
J. Carr Vineyard
Joshua T. Woody

Class of 2011
Justin R. Brazeal
Michael E. Johnson
Farbod Malek
Guy E. Reyes, Jr.
Brandon M. Seifert
Michael S. Vrana

Class of 2012
Alison L. Cabrera
John W. Hinchey
Jason P. Richards
Jay M. Stanley
Zachary S. Stinson
Darin D. Tessier

Class of 2013
William B. Bell
R. Zachary Garza
Daniel R. Grant
Matthew M. Hussey
Matthew C. Kergosien
James R. Meadows

Class of 2014
Frank A. Buttacavoli
Bradley D. Gilliam
Chad M. Kennedy
Aaron M. O’Brien
David M. Rowley
Ian J. Whitney
Class of 2015
J. Cuyler Dear
Robert G.W. Girling, V
Vishwas B. Patil
Jeremy S. Somerson
Marion M. Swall
Michael A. Weathers

Class of 2016
Davin D. Cordell
Ben S. Francisco
Nicholas E. Gerken
Todd C. Pitts
Gurpreet Singh
Danilo M. Volpini

Class of 2017
Kevin D. Christensen
Richard E. Edeen
Jason R. Gray
Brandon D. Mennear
Evan M. Tavakoli
Zibin Zhao
ALUMNI: WHERE ARE THEY NOW?

Stephen McCollam M.D.

As a newly minted graduate of the UT San Antonio Orthopaedic residency program in 1987 I drove nonstop to begin my hand fellowship at the Indiana Hand Center in Indianapolis. From day one it was clear that my knowledge base and experience at UT was so beneficial. With appropriate oversight we were expected to be autonomous both on call and in the clinics. Mutilating farm accidents from around the Midwest while on call and challenging reconstructive problems in the clinics allowed for lots of action and learning opportunities. In July of 1988 I traveled to France and then Switzerland to start my AO Upper Extremity Fellowship. I was fortunate enough to be exposed to some of the great thinkers of hand surgery in Europe in Nancy, Strasbourg and finally Berne.

I began my career at Peachtree Orthopaedic Clinic (POC) in Atlanta in Dec. of 1988. Once again, my UT residency experience was important in getting the opportunity to join this will established practice as the founders of POC knew Dr. Rockwood well. In my first year I was encouraged to join my senior partner, Bob Wells, in Haiti at Hopital Albert Schweitzer (HAS) on his annual trip. Soon thereafter, I convinced my fellow UT resident Danny Guy, to join me in this endeavor. Nearly 30 years later Danny and I still travel to HAS annually to volunteer in helping take care of the 300,000+ people of the Artibonite Valley. It has brought much joy to us both bringing the gift of mobility and health to these patients.

Soon after joining POC I was encouraged to attend the annual meeting of the Georgia Orthopaedic Society and in 1998 began serving on their board eventually serving as president in 2004-2005. I was then elected to the AAOS Board of Councilors (BOC) serving from 2008-2014. I chaired the State Legislative and Regulatory Issues Committee and served on the BOC executive committee. Most recently I have served on the newly formed AAOS Performance Measure Committee and was asked to chair the newly formed ASSH Quality Measures Committee.

Along every step of my path I have proudly shared with my colleagues the superb training I received from my mentors in San Antonio as they helped me lay the foundation for such a meaningful career. They believed in me and invested in my future by spending many hours in the OR, clinics and in lectures teaching me. As I look back at the many professional opportunities I have been given none are more important than completing my residency training at UT San Antonio. They were my most formative years and the friendships I developed have lasted a lifetime. I try never to miss the Alamo Orthopaedic Society meetings so we can relive old memories and renew friendships. I am a lucky guy!
AOS Profile 2017

Florian G. Huber, M.D.

Florian G. Huber, M.D., was born and raised in Munich, Germany. Following high-school, Dr. Huber completed 18 months of mandatory civil-service where he worked as an OR technician. He attended and graduated from Technische Universität München Medical School in 2000. He completed 4-month externships in Cardiothoracic Surgery in Berne, Switzerland and in Orthopaedic Surgery in San Antonio, TX.

Being able to learn from true giants in the field of Orthopaedic Surgery, observing outstanding role-models in every aspect of the practice of medicine, the excellent mentorship of senior residents and the high trauma volume in San Antonio completely changed Dr. Huber’s future career plans. As a foreign medical graduate he was very fortunate to be considered for a residency position at UTHSCSA and completed his Orthopaedic Surgery residency in 2007. Dr. Huber subsequently completed an Orthopaedic Trauma fellowship at Hospital for Special Surgery in New York City with Dr. David Helfet.

In 2008, Dr. Huber moved his family to the Mid-Atlantic coast of Maryland where he has joined Peninsula Orthopaedic Associates, P.A., a private-practice Orthopaedic group with 13 partners.

He continues to manage a very busy clinical practice as the Director of Orthopaedic Trauma at Peninsula Regional Medical Center in Salisbury, MD, serving major portions of the Eastern Shore of Maryland, Delaware and Virginia.

The Huber family (wife Katrin and children Maximilian, 16, and Isabella, 11) enjoys the laid-back lifestyle in the small coastal community of Berlin, MD, with beautiful natural beaches and access to year-around surf.

Dr. Huber remains involved in resident education as teaching faculty for AO North America and is a member of the Orthopaedic Trauma Association where he has joined the OTA/AAOS Disaster Response team. He has participated in humanitarian medical missions in Managua, Nicaragua and in Port-au-Prince, Haiti, in the initial phase following 2010’s devastating earthquakes.
Anil Dutta, MD

One of the central pillars of the great legacy of UTHSCSA orthopedics is a deep commitment to the international orthopedic community. UTHSCSA orthopedic surgery has served as a global beacon for decades. From the most advanced centers of excellence in the developed world to the most remote outposts of medical care, the teachings of San Antonio can be found. Textbooks, publications, and foreign fellows have all served to disseminate the philosophy of orthopedic care we have developed in Central Texas to the world.

This past year has seen the continuity in this great tradition with the impact of international legends such as Charles Rockwood, Kaye Wilkins, Fred Corley, David Green, Jesse DeLee, and Bernard Morrey ever present and flourishing. Additionally, the next generation of UTHSCSA faculty and residents have carried the legacy forward. Not only have old alliances been consolidated, but several original initiatives have been developed. UTHSCSA faculty and residents traveled to Haiti, Honduras, Mexico, and Vietnam in support of previous venues and renewed friendships. Dr. Kaye Wilkins and his team of Dr. Anil Dutta, Dr. Christina Brady, and Dr. Antonio Webb made a repeat trip to Port Au Prince, Haiti where they engaged in a program of teaching, surgery, and the installation of new arthroscopy equipment at the primary teaching hospital for the country. UTHSCSA orthopedics carried on the South Texas tradition of building bridges to Mexico and Latin America. Dr. Wilkins returned to Honduras on 2 occasions with residents Dr. Thomas Hand and Dr. Kevin Christensen. His team conducted a teaching program with an emphasis on club foot treatment. In addition, they traveled to the Children's Hospital in San Pedro Sula to perform surgery. Dr Wilkins also traveled to Monterrey, Mexico with Dr. Greg Gomez where he renewed the longstanding UTHSCSA collaboration with Muguerza (affiliated with UNLA). This past summer, 3 residents from the same program in Monterrey were granted 1 month visiting rotations in San Antonio where they worked with the foot and ankle, pediatrics, and sports medicine divisions of UTHSCSA respectively. Further in support of the UTHSCSA-Mexico exchange, Dr. Dutta was an invited as a visiting speaker at the Mexican Shoulder and Elbow Congress in Puerto Vallarta where he met with many prior visiting UTHSCSA fellows including Dr. Fernando Hiramuro, Dr. Fernando Valero, and Dr. Gabriel Martinez. In a special return international trip, Dr. Fred Corley was able to travel to Edinburgh, Scotland where he completed a critical potion of his hand fellowship training. Additionally, Dr. Trey Campbell was invited to lecture in the People’s Republic of China, and Dr. Rajiv Rajani was invited to speak in Japan.

A new program was designed around the 4th year residents’ elective time which allowed for an international rotation at a site the resident could develop with the assistance of the UT Health international office. Residents identified and organized these rotations around their specialty interests. This year’s experiences included 1 month rotations in Brazil, Switzerland, and Thailand. 4th
Year resident Andrew Lee traveled to Sao Paulo, Brazil with faculty mentors Dr. Ravi Karia and Dr. Boris Zelle to work with a former UTHSCSA international fellow in orthopedic trauma. Dr. Thomas Hand spent a month in Zurich, Switzerland with Dr. Zelle’s former mentor Dr. Pape and with past Rockwood fellow Dr. Christian Gerber.

UTHSCSA’s international orthopedics program strength has always included the hosting and training of foreign residents, fellows, and surgeons in San Antonio. Dr. Michael Wirth hosted prior UTHSCSA fellows Dr. Felipe Torro from Chile as well as Dr. Frank Lyons from Australia. He was also visited by 2 fellows from Leipzig, Germany. Visiting AO fellows from Egypt, China, and Brazil were hosted by Dr. Zelle and the Orthopedic Trauma Division.

**INTERNATIONAL VISITING FELLOWS IN 2017**

- Dr. Thomas Gaia, visiting fellow from Sao Paulo, Brazil in his OR attire at UHS.
- Dr. Anil Dutta with his former visiting fellow Fernando Hiramuro from Mexico.
- Dr. Mohammed Abdelmoemen Abuelhadid, visiting AO fellow from Cairo, Egypt with Dr. Karia and Dr. Zelle.
- Dr. Jorge Reyes, visiting fellow from Monterrey, Mexico with Dr. Mayo Galindo.
- Dr. Qiang Dong, visiting AO fellow from China, with Dr. Zelle.
- Michael Wirth with two visiting fellows from Leipzig, Germany.
- Dr. Thomas Gaia and his beautiful wife Sarah enjoying a Spurs game.
MISSION TRIP HAITI

Antonio J. Webb, MD

Orthopedic residents are afforded the opportunity to experience, learn, and train in the US using the latest technology and newest advances in equipment at sometimes at state of the art facilities. I was fortunate, on two separate occasions, to also experience medicine in an environment without these luxuries in one of the most poverish countries in the world, Port Au Prince, Haiti—an experience that will always be far from forgettable.

During both of my trips, we spent majority of our time in Port Au Prince, the capital of Haiti. Immediately upon arrival in country it was evident that the country is still recovering from the 2010 earthquake that dismantled an already poverished country. The hospital was no better, over crowed with patients, inadequate manpower, lack of supplies, and on several occasions shortage of oxygen which halted any operative activities. What I took away most from these trips are how blessed we are here in the US and how easy it is to take what we have for granted.

I would like to thank the department for allowing me to attend these trips, Dr.’s Kaye Wilkins and Anil Dutta for the opportunity to operate and learn under their supervision while in Haiti, and to Jack Willome for sponsoring our trips.

VISIT IN VIETNAM

Anil Dutta, MD

This past summer Dr. Anil Dutta (Associate Professor in shoulder elbow division) traveled to Vietnam to continue the long-term partnership between UTHSCSA and the Hospital for Orthopedics and Traumatology (HTO) in Ho Chi Minh City (Saigon). HTO is the largest orthopedic hospital in the southern half of Vietnam and the largest orthopedic training program in Ho Chi Minh City (HCMC). HTO is an extremely busy center with 100 staff orthopedic surgeons in all specialties and performs over 200 orthopedic surgical cases and sees over 1000 clinic visits a day. Dr. Kaye Wilkins began working with
HTO 20 years ago with the foresight to see the necessity of maintaining American connections to Vietnam in the postwar era. The realization of his vision is self evident today. Dr Phan Quang Tri, the current head of HTO, is a former visiting fellow with UTHSCA Orthopedics. Dr. Huynh Manh Nhi is the current head of pediatric orthopedics at HTO and is also a former visiting fellow with UTHSCSA orthopedics.

Dr. Dutta’s visit focused on pediatric and adult upper extremity injuries. He performed surgical cases with the upper extremity unit with an emphasis on proximal humerus fracture treatment strategies. Dr. Dutta shared his trauma expertise including the utilization of hinged external fixators for elbow trauma. The host Vietnamese surgeons were able to incorporate this technique immediately into their practice with equipment donated by University Hospital System. Dr. Dutta also lectured on pediatric elbow injuries in Ho Chi Minh City and was an invited speaker at Vietnam’s annual pediatric orthopedic conference in Danang.

The international Sao Paulo Brazil trauma elective was a great opportunity to experience Orthopedic trauma in different cultural environment. This elective was only possible because of the help of a number of people who supported the international elective program. Namely, Dr. Zelle and Dr. Karia participated as the faculty mentors from the UTHSCSA Orthopedics department directly supervising the trip in Sao Paulo. In addition
to contributing the education standpoint of the elective, they have built the relationship with the staff and resident surgeons in Brazil who allowed me to join their team. On the Brazil side, Dr. Guilherme Boni, Dr. Thomas Gaia, Dr. Fernando Baldy, and the six trauma fellows created a welcoming environment for me to become a part of the trauma team, working with them in the operating room as well as showing me around the city of Sao Paulo.

The clinical experience was in many ways similar to the San Antonio experience in regard to surgical technique and indications. Most morning began with a didactic lecture at the university hospital do Sao Paulo given by one of the trauma fellows. After this, everyone had morning coffee and breakfast before going to the operating room. Between cases we would see patients in clinic which was run by the residents and a staff member. There were differences in availability of implants and instrumentation in many of the public hospitals compared to the hospitals in San Antonio and the private hospitals of Sao Paulo. In the public hospitals, the drills are gas powered, the drill bits are re-used until broken, the screws are not self-tapping, and the drapes and gowns are made of cloth. Additionally, in the public hospitals, the government owned national implant companies do not always have the most user-friendly implant designs. Despite this, there is no difference in quality of care, it just made the surgeons become more creative. Over-all the variability was good especially from a training standpoint for the residents and fellows.

Outside of the hospital, the Brazilian Orthopedic trauma group have a great time with many celebrations, soccer games, and trips to the coast of Brazil. The six trauma fellows were all very welcoming and showed me around the city almost every night after cases were completed. We are currently planning for one of the trauma fellows from Brazil to come to San Antonio this upcoming summer to continue the exchange program. I look forward to our two programs continuing to grow together.

Dr. Andrew Lee in the orthopaedic resident call room.

The clinical experience was in many ways similar to the San Antonio experience in regard to surgical technique and indications. Most morning began with a didactic lecture at the university hospital do Sao Paulo given by one of the trauma fellows. After this, everyone had morning coffee and breakfast before going to the operating room. Between cases we would see patients in clinic which was run by the residents and a staff member. There were differences in availability of implants and instrumentation in many of the public hospitals compared to the hospitals in San Antonio and the private hospitals of Sao Paulo. In the public hospitals, the drills are gas powered, the drill bits are re-used until broken, the screws are not self-tapping, and the drapes and gowns are made of cloth. Additionally, in the public hospitals, the government owned national implant companies do not always have the most user-friendly implant designs. Despite this, there is no difference in quality of care, it just made the surgeons become more creative. Over-all the variability was good especially from a training standpoint for the residents and fellows.

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ELECTIVE ROTATION IN ZURICH, SWITZERLAND

Thomas Hand, MD

In the fall of 2017, I had the incredible opportunity to do an international elective orthopaedic trauma rotation in Zurich, Switzerland, under the renowned Prof. Dr. Hans-Christoph Pape. Though the kind graces of our department and Drs. Quinn and Rajani, as well as the congenial relationship between Dr. Boris Zelle and Prof. Dr. Pape, I was able to spend over a month observing, working, and learning from the Swiss trauma surgeons. Dr. Anil Dutta was able to come over as well and graciously served as
the rotation supervisor. It was an incredible experience, even more so than I had imagined, and it proved to be a fascinating comparative analysis to the American system to which I have become accustomed.

Professor Pape was named as the chairman of the Department of Traumatology at the University Hospital Zurich (UniversitätsSpital Zürich) seven months prior to my arrival, and has already been very well received and respected. As his name is ubiquitous among European and American trauma literature, he has provided a vital resource for the residents, medical students, and patients. He kindly took me under his wing and allowed me to be a part of the training process throughout my time there. I was able to see numerous new surgical techniques and approaches, which I was previously unfamiliar, and was able to see several implants not yet approved for use in the US. In addition, the faculty surgeons and residents were also kind enough to educate about the specifics of resident training and the healthcare system in Switzerland.

I spent the majority of my time here at the University Hospital Zurich with Prof. Pape. This hospital is their level 1-equivalent trauma hospital in the largest city in Switzerland. It also serves as the main hub for the other trauma hospitals throughout the country, and thus, receives significant annual volume comparatively. It is, in many ways, run and laid out similar to ours, with the largest deviation being that the Swiss trauma surgeons here initially care for all injuries, visceral and orthopaedic. Specific abdominal and thoracic trauma does eventually get transitioned to the visceral service, however, the orthopaedic trauma team is involved in initial resuscitation and management, and they are typically the primary admitting service to the large majority of trauma patients. As one can imagine, the trauma training thus has significant crossover between general surgery and orthopaedic surgery, with faculty coming from either background plus the addition of an orthopaedic trauma fellowship equivalency. Throughout my time there, I was able to see wide ranges of pathology from motorcycle and motor vehicle polytrauma patients to walking and geriatric trauma.

Towards the end of my rotation, I also had the additional opportunity to work with the shoulder and elbow service at the Balgrist University Hospital (Universitätsklinik Balgrist) with Dr. Christian Gerber. Having recently stepped down as the chairman in July 2017 after 22 years in this position, Dr. Gerber still runs a very active and successful orthopaedic practice. I was able to shadow him in the operative theatre here and see several arthroscopic and shoulder reconstructive cases, as well as spend time talking with him about his experience and career.
Overall, this international elective was an extraordinary educational experience. Not only was I afforded the opportunity to learn from several different internationally renowned surgeons and take part in the Swiss style of training, I was also asked to participate in several of their ongoing research projects now and in the future. I anticipate the connections made will last a lifetime and will hopefully lead to future collaboration between our two programs.
On April 23, 2018, we were honored to host Dr. Freddie H. Fu, Chairman of the Department of Orthopaedic Surgery at the University of Pittsburgh Medical Center as our Visiting Professor for the 22nd Philip A. Deffer, MD endowed lectureship. His lectures were well-received and well-attended by the orthopaedic faculty, fellows, residents, as well as surgeons from the community.
ANNUAL HOLIDAY PARTY 2017

Bill Edwards, MD

For 2017, the annual Orthopaedic/Podiatry Department Holiday Christmas Party was held at the Barn Door Restaurant on December 15. Those in attendance included; the Orthopaedic and Podiatry Faculty and Residents, as well as our invaluable staff from Administration, Research, Physical Therapy and the MARC Clinic along with wives and guests. An all-time attendance record was set with 137 attending. Entree choices included fillet steak, chicken, red fish or vegetarian. Many pitched in with beautiful table decorations, raffle gift cards and a delicious assortment of desserts. Faculty donations eliminated the need for drink tickets this year.

Dr. Chris Larkins received the award from the MARC staff for “The Resident We Most Liked Working With” and the Residents voted Vanessa Torres as “The MARC Employee We Most Liked Working With”. Both received gift cards.

Mike Clancy provided the evening’s musical entertainment with great renditions of classic songs from several genres. Also providing entertainment was Dr. DeHart. Having challenged the Residents to participate with a skit or poem and receiving their response of, “You first”, he obliged with the clever poem below setting the bar high for next year.

Jim’s Restaurants provided $100 worth of gift cards with other gift cards totaling approximately $300. These were given out by raffle to include each area of the Department. Special thanks went out to Samantha Jacobs, Francis Ramirez, Helena Crosby and especially, Trish from the Barn Door and their bar, kitchen and serving staff. Everyone came together from so many areas to truly make the Party a wonderful Holiday experience.

'Twas a night of Ortho

'Twas the night before Christmas here in “San Antone”,
The patients who had ’em, had all been sent home.
The TED hose were hung by the legs with the clots,
When I questioned the nurses, the said, "we forgot..."

It was Christmas eve - a holiday for some,
But not for the residents - who hold beeper and phone.
The “2” & the student were all snug in their beds,
When their beepers rang out - that sound we all dread.

They called me at midnight, I could not be much sadder
Then they dashed to the ER to see what was the matter.
A staff ER doctor was shaken and croaked,
"It’s him, It’s Saint Nick, and his femur looks broke!"
I cautioned the intern, "this sounds kinda crazy...
He works in the ER, - sometimes they’re just lazy."
Down the hall on the stretcher surrounded by techs
Was the patient with boxer shorts, pipe and his “specs”.
Lying flat on his back with his face kind of pale,
Was an obese, white man – like a beached hairy whale.
In the corner his red suit cut, tattered to shreds,
They’d stripped him and lined him, I thought, “This gnome is dead!”

But the old geezer was moaning, and trying to talk.
So I asked him, “What’s the deal gramps, why can’t you walk?”

“There was a Southwest airline that pulled out of the clouds,
Damn near flew through us! Those things are so loud,
That it spooked Donner and Blitzen and caused quite a wreck,
Something akin to the quadriga effect.
My sled it rolled over, the deer they pitched down,
I was thrown from the seat and my leg hit the ground.”
He explained how his sled and his reindeer were flying.
He could tell from my face that I thought he was lying.

His face turned bright red, he grew quite indignant,
His eyes were on fire, he said, “You think I’m some figment!”
It was 3 in the morning, there was no time for jokes,
I wondered, what herb’s in that pipe that he smokes…
The nurse liked his story, but I said, “Go call psych!”
He snorted, “At 10 you received a red bike!”
“At 15, it was some cute red-headed babe!
At 17, it was your calculus grade!

The last year of college, your medical school slot!
And then YOU matched Ortho, YOU ASKED AND I BROUGHT!”

I was shocked and amazed, I was taken aside.
I was dazed and I paused, and then loudly I cried,

“Call anesthesia, admissions and the OR,
Call Buttacavoli, explain garden type IV.
Get the labs and the x-rays, don’t give me no lip,
SANTA CLAUSE has a problem, he has broken his hip!”

It must have been magic, and too good to be true,
We rolled him right up and into room 2.

Trilock for the femur with a pinnacle cup
Frank made it in, just as the “3” finished up.
He looked at the patient, and then at the X-ray
Said, “A little in varus, but he’ll do Ok.”

No sooner than we had the last staple in,
All of our phones started beeping again!

The ER was loaded, the stretchers were packed.
The reindeer arrived with the bones they had cracked!

They’d been badly battered, horns broken in half,
Then I demanded, “Call in all the staff!”
Working up animals is hard – you can bet, but Wilkins helped out, (you know he’s vet…)

I called Dr Quinn and asked, “Please, take your pick.” He smiled and he shouldered his 30 odd six. “NO, NO, NO!” I cried out, ‘I meant you could fix ‘em!” But (BANG) I was too late. He had finished off Blitzen.

Agarwal cut bravely; he feared no M and M. Zelle said, “So what if we lose one, we’ve got venison!” We herded the deer to the OR one by one. Karia’s reamers were smokin’ by the time we got done.

Then Rudolph complained of his glowing red mass and Rajani replaced it with hoof allograft.

We thought we heard crying, kids who feared Santa would croak, But it was peds team in clinic – McCormick and Hogue.

Near Cromack popped an elf, with a hat like a funnel, Whining, “They burn and they’re numb, I’ve got carpal tunnels.” Corely said, ‘Here’s some splints” but the elf begged him, “PLEASE” and the elf got bilateral endoscopic releases!

and before little elf feet could hit the formica, Green scoped both his knees and resected his plicas! One elf groaned, “My back hurts, I can’t live with my spine” Dr. Edwards assured him, “get to work you’ll be fine.”

When the word had got out of our great ortho care, We had dozens of elves coming from everywhere! Dr. Galindo was grinning and cried, “Oh this is sweet!” When he counted their little green curly-toed feet.

Meanwhile, I went upstairs to postop Mr. Clause who was signing out AMA – to continue his cause. So I gave Santa PCA loaded at 10 With plenty of supplements he could add in. Called OT and PT and nutrition too.

I tried to remind him, “You’re still partial weight-bearing!” But he kept limping on without even caring.

He yelled, “Merry Christmas, Have a good holiday! but your census is high and I just can not stay! Thanks for the help after our near collision. I’ll come back and see you when I need a revision.”

It was clear these were moments that we would all cherish, Santa sprang to his sleigh (with a hip slightly in varus…) It climbed and into the distance they flew, Around the Tower of America and over the zoo. Then Santa exclaimed as he flew out of sight, “Look out, it’s a tanker 3 O’clock high on the right!”

All the Santas in malls have black boots that are shiny, But we’ll know the real one, by the scar on his hiny!

Merry Christmas!
Marc M. DeHart, MD
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- Abraham Lincoln

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