Collaborative Research Teams Study Strategies to Address Concussion Concerns in Sports

The Sports Medicine Division of the Department of Orthopaedic Surgery and the UC Athletics Department were an integral part of the University of Cincinnati Bearcats’ preseason football camp for the second year this August. Several new research studies were initiated during the two week camp. These studies are a part of our sports medicine team’s research program dedicated to improve the health of student-athletes and enhance their safe participation in high-level athletic programs without a risk of life-long repercussions.

Several studies are designed to address one of the major issues that face sports today—concussions—by providing vision training for the athletes. A paper from our team to be published in February 2015 will report that a comprehensive pre-season vision training program is associated with a reduction in concussion incidence in elite football players. This year we also continued a research study to determine if prophylactic intravenous fluid therapy can prevent dehydration and cramping during the early season practices. This topic is controversial, and the literature is unclear as to the role of IV fluid replacement and prevention of heat related illness. This group of athletes had IV fluids before practice and the athletes were monitored for signs and reports of muscular cramping.

Our department has been one of the leaders in a collaboration of UC researchers working on coaching and medical interventions to minimize neurological damage and provide safe, evidence-based return-to-play strategies for athletes following a concussion. Better heat-tolerance, vision enhancement and improved balance are just a few core exertional functions being investigated to not only benefit the athlete with a head injury, but reduce the risk of other injuries as well as offer enhanced athletic performance. As a result of several sports health conferences, we have begun to work with members of the U.S. Air Force Research Labs focused on human performance at Wright-Patterson Air Force Base and tested at football camp several physio monitoring systems provided by the Air Force.
Congratulations to Ferhan Asghar, MD, for being named Physician of the Quarter by UC Health University of Cincinnati Medical Center. As said at the recognition ceremony in November, “Dr. Asghar is a consummate team player… A testament to his clinical acumen are the referrals he receives for complex second opinions from other orthopaedic and neurosurgical spine surgeons in the region.”

Primary Care Sports Medicine Fellows

The department’s ACGME-accredited Primary Care Sports Medicine Fellowship which launched in July will involve fellows in the direct care of over 500 athletes and in the care of athletes at the local area high schools we support. Stephen Dailey, MD, is program director. The department welcomes John Childress, MD, who completed his emergency medicine residency at North Shore University Hospital in Manhasset, New York, and Abby Debusk, DO, who completed her family medicine residency at the University of Kentucky.

Lectureship Established in Honor of Freiberg Family

A new annual lectureship in orthopaedics has been established at the University of Cincinnati. The Freiberg Family Lectureship recognizes a family with roots several generations deep in the field of orthopaedics, as well as a particular historic significance to orthopaedics in the Tristate. Richard Freiberg, MD, is a clinical professor in the orthopaedics department at UC. The inaugural lecture—“Over 100 Years of Hip Replacement—From Ancient Times to the Most Recent Advances”—was presented jointly by Richard Freiberg and his son, Andrew Freiberg, MD, associate professor in the department of orthopaedic surgery at Harvard Medical School.

Crawford Keynotes Civil Rights Ceremony

Alvin Crawford, MD, professor emeritus of pediatric orthopaedic surgery and attending physician with UC Health Orthopaedics and Sports Medicine, was the keynote speaker at the sixth annual Ohio Civil Rights Hall of Fame induction in Columbus, on October 2, 2014.

Crawford grew up in segregated surroundings and went on to become the first African American to graduate from the University of Tennessee College of Medicine. He completed his residency at Boston (Chelsea) Naval Hospital and at the combined Harvard University Orthopaedic Program. Chief of Orthopaedic Surgery at Cincinnati Children’s Hospital Medical Center for 29 years, Crawford has trained more than 50 fellows and published six books, more than 200 peer-reviewed articles and more than 63 chapters.

Crawford has done a great deal to promote the values and benefits of diversity within the field of orthopaedic surgery, in training those from diverse and varied backgrounds. “Being able to accept other people’s values, then relate and communicate—that’s what diversity is,” he explains. “I see myself in everyone I train, and recently I’ve come to see them as training me. I’ve been learning for the last 20 years. I still haven’t gotten there, but I’ve learned a lot from people who don’t necessarily look or think like me.”

Asghar Honored for Excellence

Congratulations to Ferhan Asghar, MD, for being named Physician of the Quarter by UC Health University of Cincinnati Medical Center. As said at the recognition ceremony in November, “Dr. Asghar is a consummate team player… A testament to his clinical acumen are the referrals he receives for complex second opinions from other orthopaedic and neurosurgical spine surgeons in the region.”

Finnan Returns from Deployment

Ryan Finnan, MD, assistant professor and a major in the U.S. Air Force, recently returned from a 6-month deployment in Afghanistan. He is shown here in the operating room of the Craig Joint Theater Hospital (CJTH), Bagram Airfield, Afghanistan, in August 2014, flushing a wound. The medical staff of CJTH and 159th Combat Aviation Brigade administered emergency care to victims involved in a mass casualty event.

Richard Freiberg, MD

Andrew Freiberg

Childress

Debusk
Western & Southern Open, ATP

The Western & Southern Open, the nation’s oldest professional tennis tournament played in its city of origin, was first played in 1899. In 2014 the event set an attendance record by drawing 191,752 fans over the 16 sessions at the Lindner Family Tennis Center in Mason.

This was the first year that UC Health provided the medical coverage for the event. Brian Grawe, MD, assistant professor, led the coverage as the event Medical Director and each member of our sports medicine faculty participated in providing medical care for the course of the tournament.

AVP Cincinnati Open

About 2,000 tons of sand were trucked in to create courts for the Association of Volleyball Professionals (AVP) Cincinnati Open over Labor Day weekend at the Lindner Family Tennis Center. The AVP Cincinnati Open was the fifth event on the tour’s seven-tournament 2014 schedule.

UC Health provided medical coverage for the second year under the direction of Medical Director Christopher Utz, MD.

Three-time Olympic gold medalist Kerri Walsh Jennings and April Ross—a 2012 Olympic silver medalist—won their fifth championship in as many tournaments to push their overall record to 26-0. On the men’s side, second-seeded Jake Gibb and Casey Patterson captured their second straight Cincinnati title, their sixth title on the tour since becoming teammates.

Cincinnati Cyclones

The Cincinnati Cyclones returned for another season of hockey when they hosted the Kalamazoo Wings on October 25.

Chris Utz, MD, assistant professor, also returned for his second season as team physician.

Last season the Cyclones took a fifth place in the Eastern Conference, then won matchups against Orlando, Fort Wayne and Greenville to earn the Eastern Conference championship and book their third trip to the Kelly Cup Finals. They battled but went down to Alaska in six.

Welcome New Physicians

The department is pleased to welcome its newest faculty.

Michael Donaworth, MD, attended medical school at the University of Cincinnati, completed residency training at Ohio State University and a primary care fellowship at Cincinnati Children’s Hospital Medical Center. He will be providing outpatient care for non-surgical sports-related injuries with a specific interest in family and sports medicine issues. Donaworth is an assistant professor in the Department of Orthopaedic Surgery at the University of Cincinnati and also a team physician for the University of Cincinnati Bearcats.

Brian Grawe, MD, completed his undergraduate degree at Loyola in Chicago, Illinois, and attended both medical school and residency training at the University of Cincinnati Medical Center. He fulfilled a sports medicine fellowship at The Hospital for Special Surgery in New York, New York and then returned to his hometown to practice medicine. Grawe will be specializing in sports medicine and shoulder reconstruction with a specific interest focused on arthroscopy, sports injuries and shoulder impairments including rotator cuff injuries, shoulder arthritis and proximal humerus fractures. Grawe is an assistant professor in the Department of Orthopaedic Surgery at the University of Cincinnati and also the Medical Lead Team Physician of the Western & Southern Open ATP Tennis Tournament.

Diane Von Stein, MD, joined the University of Cincinnati in July 2014 and is currently an assistant professor in the Department of Orthopaedic Surgery. Von Stein is a graduate of the University of Cincinnati, both undergraduate and medical school. She also completed her orthopaedic surgery residency training at the University of Cincinnati Medical Center. She fulfilled a pediatric orthopaedic fellowship at Cincinnati Children’s Hospital Medical Center. Her clinical interest focuses on general surgery including pediatrics, surgery, orthopaedics, psychiatry, and obstetrics and gynecology. She is a member of the American Academy of Orthopaedic Surgeons, Pediatric Orthopaedic Society of North America, Ruth Jackson Society.

Save the Date

Trauma 101
May 28-30, 2015
Hilton Cincinnati Netherland Plaza.
Carrying the Long Tradition Forward

Chair Michael Archdeacon, MD, discusses his vision for the department

Michael T. Archdeacon, MD, is the Peter J. Stern Professor and Chairman of the Department of Orthopaedic Surgery at the University of Cincinnati Academic Health Center. He serves as the Medical Director of Operative Services and Director of the Division of Musculoskeletal Traumatology at UC Health University of Cincinnati Medical Center. He is Board-certified by the American Board of Orthopaedic Surgery and specializes in difficult fracture care.

Archdeacon attended Tulane University School of Engineering and obtained his BS in biomedical engineering, then attended the Ohio State University where he received his MD. He obtained a MS in biomedical engineering at the Ohio State University College before he completed a General Surgery Internship and an Allen Orthopaedic Surgical Research Fellowship. After completing his residency training at Case Western Reserve University School of Medicine, he obtained fellowship training in Orthopaedic Traumatology at Tampa General Hospital.

Archdeacon is currently serving on the Orthopaedic Trauma Association Board of Directors, the Mid-America Orthopaedic Association Finance Committee as well as the Executive Board of the Ohio Orthopaedic Society as the Treasurer Elect. He currently has more than fifty peer-reviewed publications and book chapters.

A native of Hamilton, Ohio, Archdeacon was recruited to UC in 2001 by Peter Stern, MD, then chair. Stern sought to fill a void in the musculoskeletal area of the department and also recognized leadership qualities in the young recruit. The first fellowship-trained traumatologist brought to the department, Archdeacon successfully advocated for a dedicated trauma room in the OR of the University of Cincinnati Medical Center, and initiated an Orthopaedic Trauma Registry for the department. Archdeacon was named chair in late 2013.
THE FUTURE OF ORTHOPAEDICS AT THE UNIVERSITY OF CINCINNATI (UC) will be built upon a multidisciplinary UC Health Musculoskeletal Institute.

The need for musculoskeletal care is predicted to grow exponentially with an aging, more active population. The UC Health Musculoskeletal Institute is strategically positioned by focusing on advanced specialty services in orthopaedic and musculoskeletal care.

In collaboration with Cincinnati Children’s Hospital Medical Center (CCHMC), we are developing programs that will facilitate patients of any age access to complex care regardless of point of origin. Examples of these unique programs include a pediatric orthopaedic transition clinic which assists adult patients in obtaining care for problems such as scoliosis, clubfoot and congenital hip dysplasia. Similarly, we have just initiated a full spectrum hip preservation program that incorporates hip arthroscopy, periacetabular osteotomy and total hip arthroplasty all within a single care pathway; thus, facilitating appropriate treatment in a convenient manner for patients. In the near future, we will introduce our limb reconstruction program that incorporates complex limb deformity correction regardless of the pathology and age of the patient. These distinct programs are only possible with committed collaboration between the adult and pediatric orthopaedic surgeons.

Coupling our clinical care to our research and education missions, we are utilizing experts in epidemiology within the College of Medicine and CCHMC to systematically evaluate clinical outcomes including the impact of prevention and treatment strategies on common orthopaedic injuries. Current areas of focus include sports-related brain injury, knee meniscus injuries, rotator cuff and labral injuries of the shoulder as well as pathology addressed via hip arthroscopy.

In response to the near epidemic occurrence of perioperative complications in diabetic and obese orthopaedic patients, we are partnering with members of the UC Health Diabetes & Metabolic Disease Institute to develop a clinical care and research program that stratifies risk for these complex patients. As these risk factors are more clearly defined, we are beginning to develop strategies and treatments to modulate that risk and decrease perioperative complications in this population. Although in its infancy, a multidisciplinary program of this nature has the potential to truly continue on next page

MICHAEL ARCHDEACON

On history

Why did you decide to go into medicine?
I was 12 and sprained my ankle. While sitting in the ortho office, I noticed a BIG man, who happened to be Pat Matson #75, a defensive lineman with the Green Bay Packers. He was also waiting to be seen for an injury. From that day forward, I knew I wanted to be an orthopaedic surgeon.

What led you to ortho trauma as a subspecialty?
When someone is injured very badly from a traumatic injury, you can make a bad thing much better; it’s very fulfilling.

What led you to UC?
Three things: 1) I liked the system that John Wyrick and Ed Lim had developed and thought I could work well with them. 2) I had family here and I liked the city. 3) Peter Stern—I thought he would be good to work for and would be a strong mentor.

On the future

What are your key strategies for the Department over the next year?
Expanding the tripartite missions; particularly academics and research, development of the junior faculty beyond clinical excellence, the musculoskeletal institute, and growing specialized services outside of our primary market

What has been your biggest accomplishment since taking on the role of Chairman?
Not my accomplishment, but I’m most proud of the faculty we have. They are an excellent group.

What is one characteristic that you believe every leader should possess?
Willingness to change (adaptability) and listening. Dr. Stern taught me to listen.
Carrying the Long Tradition Forward: Thoughts from the Chair

continued from page 5

shift the care paradigm as all of our practices have patients with these comorbidities.

Finally, as educators, we strive to share our findings, both clinical and research, not only within UC Health and the College of Medicine, but with our community peers and colleagues nationally. The educational efforts around our concussion program are emblematic of the potential impact we can have, both in educating health care providers as well as in our community. Students and resident physicians are exposed to state-of-the-art care for concussion patients, and they will take this into their communities in practice. Going a step further, our team helps educate our community about sports-related head injury in the form of coaching seminars, athletic trainer programs and community outreach sessions. Thus, the influence of our educational programs are far reaching.

The Department of Orthopaedics is poised for tremendous growth in all of our missions. Our foundation was established by the contributions of many orthopaedic icons in Cincinnati including Edward Miller, Alvin Crawford, Frank Noyes, David Butler as well as three generations of Freiberg orthopaedic surgeons (Albert, Joseph and Richard) and many others. Upon this foundation, the pillars of the current department were built through the visionary leadership of Peter Stern, MD, over his twenty-two year tenure as Chair. It is now incumbent on the current Orthopaedic faculty to carry this long tradition and mission forward for the next generation. We owe it to our predecessors to bring UC Health Orthopaedics and Sports Medicine to the highest echelons of academic orthopaedics, and to lead UC Health and the UC College of Medicine in clinical care, research and education. The UC Health Musculoskeletal Institute will serve as the platform for the next chapter of our success!

Week-long Medical Mission Trip Serves Over 100 in Honduras

Earlier this year, a medical team led by Drs. Peter Stern of UC Health and Randall Culp of the Philadelphia Hand Center traveled to Tegucigalpa, Honduras, on a medical mission organized through Health Volunteers Overseas. The team spent the week at the Hospital Escuela to screen and perform surgeries for over 100 patients; this included about 46 pediatric and more then 60 adults. They worked closely with Honduran surgeons and medical personnel providing them a learning opportunity in various aspects of the pre-operative, operative and post-operative management of the patients seen.

The medical team consisted of physicians Peter Stern, Kevin Little, Randall Culp, and Lindley Wall; Hand fellows Meredith Osterman, Phillip To, Cameron Atkinson, Micah Jones, and Brian Norton; anesthesia providers, Don Kroner, Len Romanowski, and Kathy Squeezette; interns Andrew Miller and Daniel Kopolovich; and therapists, Katie Burkhart and Rita Mak.

Sharing a moment are (left to right) John Wyrick, MD, former chair Peter Stern, MD, and Michael Archdeacon, MD.

Peter Stern, MD (center), with Hand Fellows Meredith Osterman and Phillip To

Hospital Escuela, Tegucigalpa

Back Row: Don Kroner, Brian Norton, Randall Culp, Peter Stern, Kevin Little, Lindley Wall, Meredith Osterman, Phillip To, Cameron Atkinson

Front Row: Len Romanowski, Andrew Miller, Daniel Kopolovich, Kathy Squeezette, Katie Burkhart and Rita Mak. (Not pictured: Micah Jones)
NEWS BRIEFS

Todd Kelley, MD, assistant professor, and collaborators traveled in October to present at the 2014 International Congress for Joint Reconstruction (ICJR) Transatlantic Orthopaedic Congress in New York City. In addition to Kelley, the team included:

Chris Casstevens, MD, PGY-3 Resident, UC Department of Orthopaedic Surgery;
Vasile Nistor, PhD, Assistant Professor, UC Department of Biomedical Engineering;
Jacob Stegman, BS, graduate student, UC Department of Biomedical Engineering; and
Michael Swank, MD, Christ Hospital, Cincinnati.

The following were presented:

- Accuracy of Femoral and Tibial Resection Thickness using Patient-Specific Instruments for Total Knee Arthroplasty (Kelley, Stegman, Swank).
- Accuracy of Patient-Specific Guides for Placement of the Acetabular and Femoral Component (Kelley, Stegman, Casstevens, Nistor).
- Direct Anterior Approach with a Press Fit Straight-Tapered Titanium Stem: A Learning Curve for Neutral Stem Alignment (Kelley, Stegman, Casstevens, Nistor).
- Optimization of Acetabular Cup-Bone Interface and Volumetric Bone Loss in Total Hip Arthroplasty (Kelley, Stegman, Casstevens, Nistor).

At the International Congress for Joint Reconstruction Transatlantic Orthopaedic Congress in New York City were (left to right) UC biomedical engineering graduate student Jacob Stegman, Assistant Professor Todd Kelley, MD, and Chris Casstevens, MD, orthopaedic resident.

Michael Archdeacon, MD, professor and chair, presented in October at the Orthopaedic Trauma Association 30th Annual Meeting in Tampa Florida.

Michael Archdeacon, MD, served as International Faculty for an AO Trauma Masters Course in Ahmedabad, India, September 4-6, 2014. He directed both didactic and cadaver laboratory sessions on pelvic and acetabular fractures. Sixty practicing orthopaedic fracture surgeons in India attended the course, and participated in the educational program. This is the second trip to India as an educator for Archdeacon, who also visited in September 2011 as part of the AAOS International Committee. At that time he visited and lectured in Mumbai, Delhi, Kolkata, Agra and Hyderabad.

The following abstracts have been accepted for the upcoming American Association of Orthopaedic Surgeons Annual Meeting in March 2015:

- Radiographic and Clinical Outcomes Following Total Shoulder Arthroplasty with a Microstem Humeral Component Authors are Keith Kenter, MD, and Andrew Millis, MD, who will present.
- Anatomic Reduction of Acetabular Fractures—When is the Best Time to Operate? Authors are Michael Archdeacon, MD, and Steven Dailey, MD, who will present.
- Incidence of Iatrogenic Radial Nerve Palsy Following ORIF of Humeral Shaft Nonunion Authors are Michael Archdeacon, MD, Steven Dailey, MD, and research fellow Rafael Kakazu, MD, who will present.

Congratulations to alumnus Mark Lembach, MD (2013), for his recent publication “Meniscal Repair Techniques Required for the Surgeon Performing Anterior Cruciate Ligament Reconstruction” in Sports Medicine Update, v 37, no 9, September 2014.

ALUMNI:
We want to hear from you!
Please send any news-related items to the editor, Shelley Hess, at shelley.hess@uc.edu.
Thank you.
The University of Cincinnati Department of Orthopaedic Surgery provides this news and updates for its alumni, current members and supporters.

For information, contact the editor, Shelley Hess, at shelley.hess@uc.edu