

Innovations in Orthopedics

Rady Children's
Hospital
San Diego

Rady Children's - A comprehensive system focused solely on children and adolescents.



RESEARCH

Multiple team members to present at EPOSNA meeting

Nineteen abstracts from the Division of Orthopedics & Scoliosis at Rady Children's Hospital-San Diego have been accepted for presentation at the EPOSNA Meeting on May 3-6, 2017. The authors and their research are listed below.



Maya Pring, M.D., Coordinator, Pediatric Orthopedic Residency; Clinical Professor of Orthopedic Surgery, UC San Diego



"Improved Follow-Up to Prevent Harm to Patients Undergoing Guided Growth of the Lower Extremity" (ePoster); presented by Tracey Bastrom, M.A., Clinical Research Manager

(See "Innovations" story in this issue.)



Hank Chambers, M.D., Director, Cerebral Palsy Center; Co-Director, 360 Sports Medicine; Professor of Clinical Orthopedic Surgery, UC San Diego

"Treatment of Patellar Instability in Children and Adolescents with Cerebral Palsy" (ePoster)



Matthew Ellington, M.D. (former fellow); co-authors include V. Salil Upasani, M.D., JD Bomar, M.P.H., Orthopedic Research Coordinator, and Scott Mubarak, M.D.

"Can Brace Treatment be Successful for Dislocated Hips in Infants Over Six Months of Age?" (ePoster)



Ryan Fitzgerald, M.D. (current fellow); co-authors include V. Salil Upasani, M.D., JD Bomar, M.P.H., Orthopedic Research Coordinator, and Scott Mubarak, M.D.

"Six Months of Brace Treatment Can Result in Improved Acetabular Indices in Infantile Dislocated Hips" (Podium)



Peter Newton, M.D., Division Chief; Director, Scoliosis Service; Clinical Professor of Orthopedic Surgery, UC San Diego

"Successes and Failures Following Spinal Growth Tethering for Scoliosis - A Retrospective Look Two to Four Years Later" (Podium)

"Changes in Vertebral Body Shape in Both the Sagittal and Coronal Planes Correlate with Scoliosis Severity - A 3-D Study of 445 Patients" (ePoster)

"Anterior Spinal Growth Tethering Leads to Asymmetric Growth of the Apical Vertebra" (Poster)



Andrew Pennock, M.D., Associate Clinical Professor of Orthopedic Surgery, UC San Diego

"Do All Pediatric Monteggia Fractures with a Complete Ulna Fracture Require Surgical Stabilization? Further Confirmation of the Conflict Between Operative Versus Non-Operative Treatment " (Podium)

"The Creation and Validation of a Knee Bone Age Atlas Utilizing MRI" (Podium)

"Second Fracture: A Risk Factor for Anterior Cruciate Ligament Reconstruction Failure?" (ePoster)

"Pediatric and Adolescent Clavicle Nonunions: Potential Risk Factors and Surgical Management "(ePoster)

"Intra-Articular Physeal Fractures of the Distal Femur: A Frequently Missed Diagnosis in Adolescent Athletes" (ePoster)

"Hoverboards: How the Grinch Stole Christmas" (ePoster)



V. Salil Upasani, M.D., Co-Director, International Center for Pediatric and Adolescent Hip Disorders; Assistant Clinical Professor of Orthopedic Surgery, UC San Diego

"Outcomes of Primary Total Hip Arthroplasty Compared to Conversion Hip Arthroplasty in Patients Less Than 30 Years of Age" (Podium)

"Increased Hip Intra-capsular Pressure Decreases Perfusion of the Capital Femoral Epiphysis in a Skeletally Immature Porcine Model." (Podium)

"3-D Acetabular Changes Following Ischemic Osteonecrosis of the Femoral Head in a Piglet Model" (ePoster)



Dennis Wenger, M.D., Co-Director, International Center for Pediatric and Adolescent Hip Disorders; Director, Orthopedic Training Program; Clinical Professor of Orthopedic Surgery, UC San Diego

"Ligamentum Teres Reconstruction During Medial Open Reduction for Infantile Hip Dislocation Results in Fewer Recurrent Dislocations." (Podium)



Burt Yaszay, M.D., Associate Clinical Professor of Orthopedic Surgery, UC San Diego

"Efficacy of Intra-operative Traction in Patients with CP Scoliosis" (ePoster)

"Progressive Decline in Pulmonary Function Five Years Post-Operative in Patients Who Underwent Anterior Instrumentation for Surgical Correction of Adolescent Idiopathic Scoliosis" (ePoster)



Professional society spotlights pediatric sports medicine

The [Pediatric Research in Sports Medicine Society \(PRiSM\)](#), a nonprofit, multidisciplinary group focusing solely on education and research in pediatric and adolescent sports medicine, held its [4th annual meeting](#) on Jan. 26-28 in Dallas at the Texas Scottish Rite Hospital. The meeting is designed to provide the latest information on the basic sciences, prevention, diagnosis, treatment and technical advances in sports medicine for children and adolescents.



Topics included surgery, rehabilitation, athletic training, nonsurgical interventions, basic science, radiology and practice efficiency. The keynote speakers were John Anthony Herring, M.D., chief of staff emeritus at Texas Scottish Rite Hospital for Children, and James R. Andrews, M.D., one of the founding members of Andrews Sports Medicine and Orthopaedic Center in Birmingham, Ala.

The brainchild of [Hank Chambers, M.D.](#), co-director of the [360 Sports Medicine](#) program at Rady Children's, and other leaders in pediatric sports medicine, PRiSM has over 300 members from around the world that include pediatric orthopedic surgeons, primary care sports medicine physicians, physical therapists, nurse practitioners, physician assistants and certified athletic trainers. The purpose of the organization is to foster and stimulate interdisciplinary professional education, research and interest in pediatric and adolescent sports medicine. At the annual meeting, the research is presented and study groups are formed.

Dr. Chambers is the past president, and [Eric Edmonds, M.D.](#), who co-directs 360 Sports Medicine, currently serves on the board. Sports medicine physician [Andrew Pennock, M.D.](#), along with Philip Stearns, N.P., and Kristina Parvanti, A.T.C., won the best research paper award at last year's annual meeting for his research on elbow overuse injuries in throwing athletes.



44th David Sutherland Visiting Professorship - March 10, 2017

The 44th Annual David H. Sutherland Visiting Professorship will welcome Jack Flynn, M.D., chief of orthopedic surgery at Children's Hospital of Philadelphia (CHOP) and professor of orthopedic surgery at the University of Pennsylvania, as its 2017 guest professor. The program brings leaders in the field to the Division to share their knowledge, experience and expertise.



innovation
belongs in every moment



INNOVATIONS

Automated registry in Epic improves patient care

Members of the Division have used the Epic electronic medical record system to successfully and efficiently track patients, improving the care of children undergoing guided growth of the lower extremity.

In 2015, 12 percent of patients who underwent guided growth of the lower extremity at



Rady Children's failed to receive appropriate follow-up ("lost to follow-up") by orthopedic clinic staff. Of those who were identified for follow-up, nearly one-third required surgery beyond implant removal.

To decrease the number of patients undergoing guided growth who develop iatrogenic deformity due to lack of appropriate follow-up, [Maya Pring, M.D.](#), coordinator of the pediatric orthopedic residency and a clinical professor of orthopedic surgery at UC San Diego School of Medicine, along with her colleagues (Carolina Schaber, R.N., B.S.N., M.B.A., Jacob Parker and Tracey Bastrom, M.A.), implemented an automatic registry in Epic. Initially, a registry was created in which patients had to be manually added by clinic staff when the surgery occurred. In a second phase, an automated registry was implemented to track every patient associated with a CPT code for guided growth surgery.

If any boy under 17 years old - or girl under

A winner of multiple Penn teaching awards and past president of the Pediatric Orthopedic Society of North America, Dr. Flynn lectures nationally and internationally on management of spinal disorders, pediatric fracture care, safety and value in spine care, and work-life integration for surgeons. His clinical areas of focus include spine deformity, early onset scoliosis/thoracic insufficiency, fractures, pre-school hip disorders and cerebral palsy.



Please join us on March 10 for a program filled with new ideas from Dr. Flynn and our Rady Children's Orthopedic Research team. Contact Sara Blue at sblue@rchsd.org if you would like to attend.



Learn more at RCHSD.org

15 years old - in the registry does not follow-up in the orthopedic clinic within six months of their last appointment, a nurse is alerted. The nurse then calls the family with a defined script to set up an appointment. If the patient cannot be reached by phone, a letter is sent. If a patient is flagged for not following up for three consecutive months, social workers get involved to get the child back into the clinic (unless they are getting follow-up care elsewhere).

With the initial registry, only 28 percent of the patients undergoing guided growth were captured in the registry, but in the second phase, tracking was improved to 100 percent. From March 1 to Sept. 1, 2016, 11 patients who did not follow up as recommended were identified; all but two have been contacted and brought back in for evaluation.

Since the automated registry was started, no patients have developed an iatrogenic deformity; the current "lost-to-follow-up rate" for this group is less than 2 percent, which is significantly improved from the prior 12 percent rate ($p=0.003$). By ensuring routine follow-up, the plates are removed when the deformity is corrected and before a new deformity is created.

Due to the success of the registry and follow-up system, they are currently being expanded to other diagnoses and procedures.