2012

PAEDIATRIC ORTHOPAEDIC SURGERY

FELLOWSHIP

THE HOSPITAL FOR SICK CHILDREN
Division of Orthopaedic Surgery
Fellowship training in paediatric orthopaedics at The Hospital for Sick Children offers the broadest surgical experience in one of the busiest clinical settings in North America.
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Paediatric orthopaedic fellowships are a long-honoured tradition at SickKids. Ensuring the best fellowship experience remains a high priority for every faculty member. A fellow’s experience includes hands-on operative experience in standard and complex cases, one of the broadest clinical exposures available anywhere in the world, numerous educational rounds, local academic conferences and cadaver labs, as well as travel opportunities to society meetings in North America. Interaction with fellows from across the globe provides a unique exposure to perceptions and practices from diverse and respected clinical traditions.
The Hospital for Sick Children is among the premier paediatric institutions of the world. It offers primary and secondary care for the population of metropolitan Toronto, as well as tertiary and quaternary care for patients from all communities in Ontario, and for children throughout the world. It has 370 beds, 759 physicians and 17 operating rooms—two of which are dedicated orthopaedic rooms. Excluding day cases, over 1200 inpatient orthopaedic operative cases are undertaken annually. A new 21 storey, $400 million Research and Learning Tower is currently under construction. It is due to open in 2013.
The breadth and volume of surgical education in paediatric orthopaedics for clinical fellows at The Hospital for Sick Children is unparalleled. This exposure is attributable to a catchment population of eight million combined with a faculty of ten surgeons with both general and subspecialty expertise.

**BREADTH OF SURGICAL EDUCATION**

Hip relocation, innominate osteotomy, periacetabular osteotomies, Wedge pelvic & femoral osteotomies, Wagner double osteotomy, articulated hip distraction, surgical hip dislocation.

Limb deformity correction and lengthening, Ilizarov & Taylor Spatial Frame application, monolateral frame reconstruction, CHAOS procedures, pelvic support osteotomy, surgical reconstruction for congenitally deficient joints.

Arthroscopy, sports injuries, chondral and ligament repair in children and young adults.

Congenital and idiopathic spine deformity correction from occiput to sacrum, direct vertebral derotation, VEPTR, complex osteotomy and instrumentation.

Benign and malignant tumour resection, limb salvage, biological and endoprosthetic reconstruction, muscle flaps.

Primary and recurrent clubfoot, congenital vertical talus, multi-segment foot osteotomy and soft tissue reconstruction.

Cerebral palsy soft tissue management, ostotomies, single event multi-level surgery.

Upper extremity & brachial plexus palsy sequelae reconstruction, glenoid osteotomy, tendon transfers.

Single level and complex polytrauma, bone & joint infections.

Osteogenesis imperfecta, corrective osteotomy and telescopic rodding.

Faculty are committed to an educational mandate: It is a priority that fellows actively operate and expand their surgical skills.
In addition to surgeon-specific clinics, SickKids orthopaedic clinics include the following:

**DDH Clinic** is held weekly. The fellow performs a comprehensive assessment including ultrasound on all follow-up infants in the clinic, providing real time education on developmental dysplasia of the hip.

**Limb Reconstruction Clinic** for planning and monitoring complex deformity correction and limb lengthening using state of the art methods of internal and external fixation.

**Complex Spine Clinic** occurs once a month under the direction of orthopaedics and neurosurgery.

**Bone Health Clinic** is a weekly multidisciplinary clinic that runs with participation from orthopaedics, endocrinology and clinical genetics, with a focus on genetic bone diseases.

**Musculoskeletal Tumour Clinic** runs every week with orthopaedics, medical oncology, physiotherapy and plastic surgery.

**Combined Brachial Plexus Palsy Clinic** runs once a month with plastic surgery and orthopaedics.

**Clubfoot Clinic** for cast treatment using the Ponseti method runs weekly with collaboration between the orthopaedic surgeons and a specialty-trained physiotherapist practitioner.

**Fracture Clinic** is held four times a week by the residents and a specialty-trained nurse practitioner, with supervision from the orthopaedic staff surgeons.

**Scoliosis Clinic** for non-operative management of spine deformity is run by a specialty-trained physiotherapist practitioner.

**Young Adult Hip Clinic** combines the expertise of hip surgeons from Mt. Sinai Hospital, St. Michael’s Hospital and SickKids. This clinic focuses on transitional aged patients.
### Holland Bloorview Kids Rehabilitation Hospital Clinics

<table>
<thead>
<tr>
<th>Neuromuscular</th>
<th>Alman</th>
<th>Monthly</th>
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<tbody>
<tr>
<td>Neuromuscular Spine</td>
<td>Zeller</td>
<td>Monthly</td>
</tr>
<tr>
<td>Cerebral Palsy</td>
<td>Narayanan/Wedge</td>
<td>Weekly</td>
</tr>
<tr>
<td>Spina Bifida</td>
<td>Wright</td>
<td>Twice a month</td>
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<tr>
<td>Amputee and Prosthetics</td>
<td>Kelley</td>
<td>Every 3 months</td>
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### Outreach Clinics

- **Erinoak Kids**
  - Narayanan/Wright
  - Mississauga
- **Grandview Children's Centre**
  - Narayanan
  - Oshawa
- **March of Dimes Northern Medical Clinics**
  - Howard
  - Cochrane
- **Five Counties Children's Centre**
  - Narayanan/Wright
  - Peterborough
The fellowship training program ensures that fellows gain experience in all major areas of paediatric orthopaedics. Each fellow rotates with two surgeons every three months. There is some flexibility regarding the roster which is established in consultation with each fellow. Our goal is for fellows to develop highly competent skills and sound clinical judgment to be leading academic paediatric orthopaedic surgeons. Fellow responsibilities include preparation and surgical treatment for elective cases, operative fracture treatment, outpatient clinics and research. A typical fellow weekly assignment includes two operating room days, two clinic days, and at least one half day for research.

The Hospital for Sick Children is a level I paediatric trauma centre and has a broad referral base for emergent conditions. Becoming confident with the acute management of fractures, complex trauma and bone and joint infections is an essential aspect of paediatric orthopaedic training. Principles and experience gained from these areas translate broadly to elective scenarios. Clinical fellows take call on a hierarchical roster together with residents and faculty. Primary calls to the emergency department, the ward and from other institutions are fielded by the residents. Fellows assume duties that are transitional on their way to becoming faculty themselves. They are called mostly for advice and to take cases to the operating room, not usually to visit the emergency department or the wards. Fellows have privileges to take cases to the operating room independently. Faculty usually allow the fellow to supervise operative management.
### Educational Rounds

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Activity</th>
<th>Leader</th>
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<tbody>
<tr>
<td>Monday</td>
<td>7:00 am</td>
<td>Weekly Review</td>
<td>Narayanan/Murnaghan</td>
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<tr>
<td></td>
<td>4:00 pm</td>
<td>Chairman's Rounds</td>
<td>Alman</td>
</tr>
<tr>
<td>Tuesday</td>
<td>7:00 am</td>
<td>Resident Rounds</td>
<td>Rotating Staff</td>
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<td></td>
<td>4:30 pm</td>
<td>Hip Rounds</td>
<td>Wedge/Kelley</td>
</tr>
<tr>
<td>Wednesday</td>
<td>7:00 am</td>
<td>Fracture Rounds</td>
<td>Rotating Staff</td>
</tr>
<tr>
<td>Thursday</td>
<td>7:00 am</td>
<td>Week 1: Journal Club</td>
<td>Narayanan</td>
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<td>Week 2: Indication Rounds</td>
<td>Alman</td>
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<td>Week 3: Research Rounds</td>
<td>Howard</td>
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<tr>
<td></td>
<td></td>
<td>Week 4: Morbidity &amp; Mortality</td>
<td>Hopyan</td>
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<tr>
<td>Friday</td>
<td>7:30 am</td>
<td>Week 1: U of T Surgery Rounds</td>
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<td>Week 3: Sickkids Surgery Rounds</td>
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<td></td>
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<td>Week 4: U of T Ortho Rounds</td>
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CURRICULUM FOR ORTHOPAEDIC ROUNDS

1. Developmental dysplasia of the hip
2. Legg-Perthes disease
3. Slipped capital femoral epiphysis
4. Scoliosis—idiopathic and congenital
5. Kyphosis—idiopathic and congenital
7. Spondylolisthesis
8. Club foot, congenital vertical talus
9. Osteomyelitis and septic arthritis
10. Leg length discrepancy and physeal arrest
11. Sprengel’s deformity, torticollis, Klippel Feil syndrome, Erb's palsy
12. Cavus foot, adolescent bunions, tarsal coalition, skew foot, metatarsus adductus
13. Neurofibromatosis (congenital pseudarthrosis of the tibia), tibia vara
14. Polio myelitis, muscular dystrophy, arthrogryposis
15. Cerebral palsy
16. Spina bifida
17. Bone dysplasia and genetic disease
18. Benign and malignant tumours of bone
19. Congenital limb deficiencies
20. Recurrent dislocation of the patella, chondromalacia and discoid meniscus
21. Congenital hand anomalies

CURRICULUM FOR FRACTURE ROUNDS

1. Monteggia fractures, medial epicondylic fractures
2. Humeral and clavicular fractures
3. Supracondylar fractures
4. Elbow dislocations, lateral condyle and other elbow fractures
5. Forearm fractures, wrist fractures
6. Spine fractures
7. Pelvic fractures
8. Hip fractures
9. Femoral shaft fractures
10. Knee fractures
11. Tibial fractures
12. Ankle fractures
13. Foot fractures
14. Paediatric multiple trauma, open fractures
15. Compartment syndrome and vascular injury
16. Pathological fracture and non-accidental injury
17. Growth plate injuries and sequelae
18. Combined sessions with plastic surgery on hand fractures
RESEARCH OPPORTUNITIES
Numerous ongoing or new research projects can be chosen by fellows. The faculty include bona-fide clinical epidemiologists as well as basic scientists with a wide range of clinical and research interests for guidance. A highly qualified clinical research assistant is dedicated entirely to facilitating fellow research projects, with the ability to help with study design, obtain ethical board approval and in data analysis.

PROFESSIONAL AND PERSONAL LEAVE
Fellows are encouraged to attend North American and international paediatric orthopaedic meetings, including POSNA and IPOS. Each fellow is provided with a stipend for travel expenses in addition to their salary. Fellows have four weeks a year of paid vacation leave, plus one week of conference leave.

CADAVER SURGICAL SKILLS LABS
Fellows participate in hands on cadaver skills labs to learn specific surgical approaches and more complex procedures including,

- **Hip**: surgical dislocation, advanced pelvic osteotomies
- **Foot**: soft tissue reconstruction and foot osteotomies
- **Spine**: instrumentation and osteotomies
- **Upper Extremity**: brachial plexus dissection and shoulder reconstruction
- **Extensile Exposures**: upper/lower limb and pelvis for tumour reconstruction
- **Arthroscopy**: knee, hip, shoulder
SELECT FACULTY PUBLICATIONS IN 2011

Ahn H, Kreder H, Mahomed N, Beaton D, Wright JG. Empirically derived maximal acceptable wait time for surgery to treat adolescent idiopathic scoliosis. CMAJ. 2011 Jun 14;183(9):E565-70

Alman BA, Kelley SP, Nam D. Heal thyself: using endogenous regeneration to repair bone. Tissue Eng Part B Rev. 2011 Dec;17(6):431-6


Hsu SH, Zhang X, Yu C, Li ZJ, Wunder JS, Hui CC, Alman BA. Kif7 promotes hedgehog signaling in growth plate chondrocytes by restricting the inhibitory function of Sufu. Development. 2011 Sep;138(17):3791-801


Murnaghan ML, Forte M, Choy IC, Ahner E. Innovations in Teaching and Learning in the Clinical Setting for Postgraduate Medical Education. Future of Medical Education Project, November 2011; fmecpg@afmc.ca


SELECT FELLOW PUBLICATIONS IN 2011


SOCIAL EVENTS

Numerous social events for fellows take place throughout the year, from formal occasions organized by the University of Toronto and the Division of Orthopaedic Surgery to more informal debriefing sessions held in local drinking establishments with the SickKids staff surgeons and allied health professionals. Due to the multidisciplinary nature of paediatric orthopaedics, and the large number of residents and fellows from around the world, there is always a fun and friendly atmosphere which lends itself particularly well to these occasions.

An annual welcome event for fellows and their families is held in a hospitality suite at the Rogers Centre stadium during a Blue Jays baseball game in September. This is followed in the fall months by the Salter and Rang visiting professorships which include dinner outings with spouses.

The holiday party in December is a big event that includes multiple groups throughout the hospital affiliated with our division. The location varies and in recent years has been held at the Hockey Hall of Fame, The Distillery District and the Academy of Spherical Arts. With winter comes snow, and what better way to enjoy the weekend than join the Annual fellows family ski day hosted at a local ski hill just north of Toronto. We pride ourselves on getting everyone up on skis no matter how young or inexperienced they may be with the white slippery stuff. Sharing in the fellowship experience, fellows and their families become good friends and in addition often host their own barbecues or outings over the course of the year.
SEPTEMBER
U of T Division of Orthopaedic Surgery Fellows Welcome Dinner
SickKids Orthopaedics
Blue Jays Baseball Game
Welcome New Fellows
2011 Salter Visiting Professorship
Dr. Peter Newton
Rady Children’s Hospital, San Diego

OCTOBER
U of T Division of Orthopaedic Surgery
University Wide Rounds
Dr. Robert Marx
Hospital for Special Surgery, New York

NOVEMBER
U of T Division of Orthopaedic Surgery
University Wide Rounds
Dr. Bas Masri
University of British Columbia, BC

DECEMBER
U of T Division of Orthopaedic Surgery
Holiday Party
SickKids Division of Orthopaedics
Holiday Party

JANUARY
U of T Division of Orthopaedics
University Wide Rounds

FEBRUARY
U of T Division of Orthopaedics
University Wide Rounds

MARCH
U of T Department of Surgery
Harland-Smith Lecture
U of T Division of Orthopaedics
University Wide Rounds
Dr. Peter Bonutti
Bonutti Clinic, Effingham, IL

APRIL
U of T Division of Orthopaedics
Residents Graduation Day
U of T Department of Surgery
Palmer Lecture
U of T Division of Orthopaedics
University Wide Rounds
Dr. Marc Philippon
The Steadman Clinic, Vail, Colorado

MAY
U of T Department of Surgery
Gallie Day

JUNE
U of T Division of Orthopaedic Surgery
Citywide Fellowship Day
2012 Rang Visiting Professorship
Dr. Michael Sussman
Shriners Hospital for Children, Portland

U of T Division of Orthopaedic Surgery
University Wide Rounds
Resident invited speaker
“Working with me, the fellow will learn how to manage and surgically address the limbs and spine in children with genetic and neuromuscular disorders. In addition, the fellow will be challenged to question traditional orthopaedic dogma.”

“Working with me, fellows will learn a contemporary approach to benign and malignant tumours, as well as to brachial plexus birth palsy. They will practice dissection skills, perform intralesional and wide resection, and undertake reconstruction using biologic and endoprosthetic techniques specific to children.”
ABOUT THE FACULTY

ANDREW HOWARD MD, FRCSC, MSc
Associate Professor, Division of Orthopaedics
Co-Director, Trauma Program
Scientist, Child Health and Evaluative Sciences
Head, University Office of International Surgery

From: High Prairie, Alberta, Canada
Medicine: Queen’s University, Kingston
Graduate: University of Ottawa
Residency: Queen’s University, Kingston
Fellowship: Paediatric Orthopaedics: The Hospital for Sick Children, Toronto
Clinical Practice:
Lower extremity deformity
Spinal deformity
Complex trauma
Vascular malformations
Skeletal dysplasias
Childhood osteoporosis
Research:
Injury prevention
International surgery
Clinical epidemiology

“I operate on all regions of the axial and appendicular skeleton, both acutely and for reconstruction or deformity correction. Deformities from trauma, osteogenesis imperfecta and skeletal dysplasias form a large part of my elective practice. When working with me the fellow will teach the residents how to operate on common fractures, and will learn to operate on complex fractures and deformities.”

SIMON KELLEY MBChB, FRCS (Tr and Orth)
Assistant Professor, Division of Orthopaedics
Project Investigator, Developmental and Stem Cell Biology

From: Bath, UK
Medicine: University of Birmingham, UK
Residency: Leeds and Bristol, UK
Fellowship: Limb Reconstruction: The Royal Children’s Hospital, Melbourne, Australia
Trans-Canada Paediatric Orthopaedics: The Hospital for Sick Children, Toronto
Shriners Hospital for Children, Montreal
BC Children’s Hospital, Vancouver
Clinical Practice:
Congenital limb deficiencies
Hip surgery
Skeletal dysplasias
Post-traumatic limb deformity
Trauma
Research:
Bone regeneration
Limb reconstruction outcomes

“Working with me, fellows will learn about all aspects of limb reconstruction including modern analysis techniques and operative reconstruction with circular, monolateral and implantable devices. They will also be exposed to a large volume of hip pathology and surgery including the full range of femoral and pelvic osteotomies including hip dislocation and articulated hip distraction.”
STEPHEN LEWIS  MD, MSc, FRCSC
Associate Professor, Division of Orthopaedics,
The Hospital for Sick Children and The Toronto Western Hospital

From: Montreal, Canada
Medicine: McGill University, Montreal
Residency: University of Toronto
Graduate: University of Toronto
Fellowship:
  Adult Spine and Trauma:
    St. Michael’s Hospital, Toronto
  Spinal Deformity:
    Washington University, St. Louis
Clinical Practice:
  Spinal deformity in children and young adults
  High grade spondylolisthesis
  Complex congenital scoliosis
  Spinal osteotomies
Research:
  Spine deformity correction outcomes
  Surgical skill acquisition

“Working with me, the fellow will experience a wide variety of spinal deformities. They will learn to become comfortable with a range of spinal instrumentation techniques and perform advanced procedures such as pedicle subtraction osteotomies, Smith-Peterson osteotomies and vertebral column resection.”

LUCAS MURNAGHAN  MD, MEd, FRCSC
Assistant Professor, Division of Orthopaedics
Educator-Researcher, The Wilson Centre
Surgical Director, MacIntosh Sports Medicine Clinic

From: Ottawa, Canada
Medicine: Queen’s University, Kingston
Residency: University of British Columbia
Graduate: University of British Columbia
Fellowship:
  Arthroscopy and Athletic Injuries:
    University of British Columbia
  Pediatric Orthopaedics:
    The Royal Children’s Hospital, Melbourne, Australia
    Texas Scottish Rite Hospital for Children, Dallas, Texas
Clinical Practice:
  Sports medicine and arthroscopy in children and young adults
  Pediatric orthopaedics and Trauma
Research:
  Surgical education
  Children’s minimally invasive surgery outcomes

“Working with me, the fellow will develop surgical skills specific to the treatment of acute and chronic injuries in the growing athlete. This will include a broad experience in arthroscopy of the shoulder, elbow, hip, knee and ankle.”
UNNI NARAYANAN  MD, MPH, FRCSC
Associate Professor, Division of Orthopaedics
Scientist, Child Health and Evaluative Sciences

From: Madras, India
Medicine: Madras Medical College, India
Residency: University of Minnesota, Minneapolis
Fellowship: Paediatric Orthopaedics: The Hospital for Sick Children, Toronto
Cerebral Palsy & Gait Analysis: Gillette Children’s Hospital
University of Minnesota, St. Paul
Clinical Practice: Cerebral palsy & developmental delay
Lower extremity deformity correction
Congenital lower limb deficiency
Clubfeet and other foot disorders
Research: Clinical epidemiology
Decision making in cerebral palsy
Fracture outcomes

JOHN WEDGE  OC, MD, FRCSC
Professor, Division of Orthopaedics
Associate Dean and Associate Vice-Provost, Faculty of Medicine, University of Toronto

From: Saskatoon, Canada
Medicine: University of Saskatchewan
Residency: McGill University and University of Saskatchewan
Fellowship: Paediatric Orthopaedics: The Hospital for Sick Children, Toronto
Clinical Practice: Hip reconstruction in children and young adults
Cerebral palsy
Surgical education
Research: Hip reconstruction outcomes
Developmental dysplasia of the hip
Avascular necrosis of the proximal femur

“Working with me, fellows will learn an approach to the care of children with chronic developmental disabilities, especially cerebral palsy. The fellow will also learn the management of a broad spectrum of congenital and acquired lower limb length inequalities and deformities.”

“When working with me, the fellow will see and discuss the full range of hip pathology. In the operating room they will learn the classic open reduction and innominate osteotomy. They will also learn the surgical management of hip conditions such as Perthes disease, SCFE, Coxa Vara and neuromuscular disease.”
James Wright  MD, MPH, FRCSC

Surgeon-in-Chief, Hospital for Sick Children
Professor, Division of Orthopaedics
Senior Scientist, Child Health and Evaluative Sciences
Robert B. Salter Chair in Surgical Research

From: Nova Scotia, Canada
Medicine: Dalhousie University, Halifax
Residency: University of Toronto
Fellowship:
Paediatric Orthopaedics:
The Royal Children’s Hospital, Melbourne, Australia
Clinical Practice:
Primary and recurrent clubfeet
Other foot disorders
Spina bifida
Neuromuscular disorders
Scoliosis
Research:
Clinical epidemiology
Surgical safety
Reducing surgical wait times
Unmet need and disparity in health care
Patient-specific outcome measures

“Working with me, fellows will systematically deconstruct multi-segmental foot deformities and learn to undertake corrective osteotomies and soft tissue reconstruction. Fellows will also learn all the rare procedures performed for spina bifida.”

Reinhard Zeller  MD, FRCSC

Associate Professor, Division of Orthopaedics
Head, Spine Program

From: Paris, France
Medicine: University of Paris
Residency: University Hospitals of Paris
Fellowship:
Paediatric Spine Surgery:
Texas Scottish Rite Hospital for Children, Dallas, Texas
Clinical Practice:
Complex spine surgery in children
Early onset and late onset scoliosis
Complex congenital scoliosis
High grade spondylolisthesis
Research:
Spine deformity correction outcomes
3D spinal deformity analysis

“When working with me fellows will learn how to safely and efficiently treat complex spinal deformities, to understand and analyse three dimensional aspects of scoliotic deformity. They will also acquire the technical skills to carry out successful spinal deformity correction.”
Henry received his orthopaedic training at the University of Texas Southwestern. He then completed a sports medicine fellowship at the Steadman Philippon Research Institute where he focused on hip arthroscopy and complex knee injuries. Upon completion of his paediatric fellowship at SickKids, Henry will join the Texas Scottish Rite Hospital and Children’s Medical Center in Dallas for a career in paediatric sports medicine. He intends to focus his time and research on adolescent hip injuries and injury prevention. He is a physician member of AOA, AOSSM, and The United States Ski and Snowboard Team.

Zaid was born in Iraq and is now a Danish citizen. He graduated from Baghdad University where he initially practiced orthopaedic surgery. He then completed orthopaedic residency and a paediatric orthopaedic fellowship in Denmark. More recently he has been a faculty member at Odense University Hospital as a staff orthopaedic surgeon. His interests are traumatology, deformity correction and paediatric spine surgery. He has published extensively in these areas.

David Lebel grew up in Bat-Yam, Israel. Following 4 years of mandatory military service he attended medical school at Ben-Gurion University in Beer-Sheva. During that time he also completed his PhD in neurophysiology. He then joined the orthopaedic residency program at Soroka Medical Center Beer-Sheva. Prior to arriving to the Hospital for Sick Children in Toronto he completed a year of paediatric orthopaedic fellowship in Dana Children’s Hospital in Tel Aviv. At the end of his clinical fellowship David will stay for a research year in which he will focus on studying a novel approach of selective growth plate modulation. On completion of his fellowship, David is planning to join the paediatric orthopaedic department in Dana Children’s Hospital in Tel Aviv, Israel as a staff surgeon. David is a proud father to his two kids. The family spends Toronto’s long weekends hiking and paddling, in addition, he enjoys cooking, skiing and running.

Abdelsalam received his undergraduate medical degree from the University of Ankara-Turkey. His orthopaedic residency was completed at Hacettepe University/Ankara. In 2005, he moved back to his native Qatar working as a general orthopaedic surgeon with a special interest in adult and paediatric trauma. During that time he developed a passion for paediatric orthopaedics, and in particular deformity correction. Abdelsalam has pursued these areas of clinical interest with a series of courses and short international visits. Following his fellowship at Sickkids, Abdelsalam will be returning to Sidra Medical and Research Center in Qatar a staff surgeon. In his free time he enjoys scuba diving and spear fishing in the gulf reefs.

Charles grew up in Minneapolis, Minnesota. He earned his Bachelor of Arts degree in economics from Colgate University. He then attended medical school at Tulane University in New Orleans. His orthopaedic residency was completed at the University of Miami/Jackson Memorial Hospital where he served as chief resident. He then returned to Minnesota for a sports fellowship at MOSMI before coming to SickKids. Charles is an avid sports enthusiast. In addition to supporting all Minnesota sports teams, he enjoys cooking, running, racquetball and hockey.

Lin received her PhD of surgery from the Medical School of Soochow University in China. Following this she completed her paediatric orthopaedic training in Shanghai Children’s Medical Center in Shanghai, China. After one year of clinical fellowship in Shriner Hospitals for Children in Portland, USA she developed interest in gait analysis and treatment of cerebral palsy and neuromuscular disease. In addition, she is a member of the American Academy for Cerebral Palsy and Developmental Medicine. In the future, she will continue to focus on research and the treatment of cerebral palsy and neuromuscular disease. In her spare time, Lin likes to travel, read and spend time with her family.

2005

- Kevin Lim
  - KK Women's and Children's Hospital, Singapore
- Warren Terry
  - Mission work, Africa
- Mahzad Javid
  - Paediatric Orthopaedist, Iran
- Joseph Janicky
  - Children's Memorial Hospital, Chicago, USA
- Simon Thomas
  - Bristol Royal Children's Hospital, UK
- Atul Bhaskar
  - Children's Specialty Orthopaedic Clinic, Mumbai, India

2006

- Subir Jhaveri
  - Dr. Subir Jhaveri’s Spine Hospital, Ahmedabad, India
- Scott Mackie
  - St. John's Private Hospital, South Hobart, Australia
- Leonhard Rameier
  - University Children's Hospital, Zurich, Switzerland
- Fabio Ferri-de-Barros
  - Alberta Children's Hospital, Calgary, Canada
- Paul Jellicoe
  - Children's Hospital, Winnipeg, Canada
- Eyal Mercado
  - Carmel Hospital, Paediatric Orthopaedic Service, Israel

2007

- Shahryar Noordin
  - Aga Khan University, Karachi, Pakistan
- Om Prakash Sharma
  - Mt. Sinai Hospital, Toronto, Canada (Clinical Fellowship)
- Federico Canavese
  - University Hospital of Clermont-Ferrand, France
- Andrew Gong
  - Waverley Private Hospital, Victoria, Australia
- Richard Hocking
  - Capital Orthopaedics, Canberra, Australia

2008

- Michael Segbefia
  - Korle-Bu Teaching Hospital, Accra, Ghana
- Maulin Shah
  - Sterling Hospital, Ahmedabad, India
- Cristina Alves
  - Staff Position in Coimbra, Portugal
- Simon Kelley
  - The Hospital for Sick Children, Toronto, Canada
- Karl Logan
  - IWK Health Centre, Halifax, Canada
- Michael Zaidman
  - Rambam Medical Centre, Israel

2009

- Benjamin Holroyd
  - Derriford Hospital, Plymouth, Devon, UK
- Dominique Knight
  - The Royal Infirmary of Edinburgh, UK
- Francisco Nyiuro
  - CURE Hospital, Ethiopia
- Anna Cuomo
  - Shriners Hospital for Children, Los Angeles, USA
- Kathryn Doughty
  - Shriners Hospital for Children, Los Angeles, USA
- Thomas Palocaren
  - Christian Medical College Vellore, India
- Ahmed Ali Jahwari
  - Muscat City Centre, Oman

2010

- Jason Donovan
  - Waikato Hospital, New Zealand
- Stephen Cooke
  - University Hospitals Coventry and Warwickshire, UK
- Emily Dodwell
  - Hospital for Special Surgery, New York, USA
- David Wright
  - Countess of Chester Hospital, Chester, UK
- Talal Ibrahim
  - Sydney Children's Hospital, Australia
- Walter Truong
  - Regions/Westfields Hospital, Minnesota, USA
The Salter Society is comprised of clinical fellows who previously trained at SickKids. We have grown to over 330 members since the mid-1960s. The continued excellence of alumni is an enduring source of pride for our institution.
SICKKIDS PAEDIATRIC ORTHOPAEDIC FELLOWSHIP

Five clinical fellowship positions in paediatric orthopaedics are available at The Hospital for Sick Children each year. Two fellowship positions are available for eligible candidates through the San Francisco matching scheme for paediatric orthopaedics. These fellowships commence in August each year. Three further fellowship positions are available through a direct application to The Hospital for Sick Children and can commence in either February or August depending on availability. The duration of the fellowship is for one year. Six month fellowships are not encouraged.

The Division of Orthopaedics is seeking candidates with a strong clinical and academic background that demonstrates proficiency in orthopaedic surgery and related subjects. Candidates will be pursuing a clearly defined path in paediatric orthopaedic surgery. International Medical Graduates who have obtained their medical education and training from non-Canadian, American, British or Australian systems, are encouraged to obtain several years experience as a paediatric orthopaedic surgeon before applying to the program.

SICKKIDS SPINE FELLOWSHIP

The Hospital for Sick Children also offers an advanced fellowship in paediatric spinal deformities. This single-specialty fellowship provides comprehensive training in the surgical and conservative treatment of paediatric spinal disorders, however the focus of this fellowship is on the surgical reconstruction of complex deformities. Substantial previous experience in spinal surgery is a prerequisite to applying for this fellowship. Fellows are mentored by the two paediatric orthopaedic spine surgeons; Dr Zeller and Dr Lewis. The spine fellow also participates in the paediatric orthopaedic on-call schedule for trauma. The training period can range from six months to one year.

TRANS-CANADA PAEDIATRIC ORTHOPAEDIC FELLOWSHIP

Three children’s hospitals across Canada offer a combined fellowship program in paediatric orthopaedics, and is awarded to applicants who show an exceptional level of scholarship. Fellows have an opportunity to work at The Hospital for Sick Children, Toronto; BC Children’s Hospital, Vancouver; and Shriners Hospital for Children, Montreal for a period of 6 months at each institution. The program is designed to provide a comprehensive and diverse fellowship experience in paediatric orthopaedic surgery, to engage fellows in collaborative and multidisciplinary clinical care, deepen their research experience and expand their professional network. As each institution specializes in different types of musculoskeletal problems, training in these specialized areas is available.

From an administrative standpoint the fellow’s primary educational institution will be the University of Toronto with elective periods at the University of British Columbia (for BC Children’s Hospital) and McGill University (for Shriners Hospitals for Children); as such, The Hospital for Sick Children will be the first rotation. Trans-Canada fellows must rotate at all three institutions. It is not mandatory to be fluent in French to be considered for this program. Fellows will be required to apply for separate work visas and educational licenses from each province. Each institution is responsible for providing a stipend.

Interested applicants should visit each institution’s website to find out more about their individual programs.
SICKKIDS PAEDIATRIC ORTHOPAEDIC FELLOWSHIP

Applicants who obtained their residency training from a North American institution must apply through the SF Match at www.sfmatch.org. All other international applicants should send the following documents electronically to the Division of Orthopaedics Administrator:
- Curriculum vitae, photograph, personal statement (500 word limit),
- three letters of reference.

All complete applications are reviewed by the orthopaedic faculty, and short-listed candidates will be contacted for a series of telephone interviews. The orthopaedic faculty meet to adjudicate on all candidates interviewed. The short-listing process, interviews and notification of successful candidates takes place two years prior to the start date of the fellowship. All applicants will be notified of the status of their application at this time.

SICKKIDS SPINE FELLOWSHIP

International applicants with substantial prior experience in spine surgery are eligible for the SickKids Spine Fellowship. The application process is directly through the Hospital for Sick Children. Applicants should forward the following documents electronically to the Division of Orthopaedics Administrator:
- Curriculum vitae, photograph, personal statement (500 word limit),
- three letters of reference.

All complete applications are reviewed by Dr. Zeller, and short-listed candidates will be contacted for a telephone interview with Dr. Zeller who will select the successful candidate. The short-listing process, interviews and notification of successful candidates takes place two years prior to the start date of the fellowship. All applicants will be notified of the status of their application at this time.

TRANS-CANADA PAEDIATRIC ORTHOPAEDIC FELLOWSHIP

All North American and international applicants are eligible for the Trans-Canada Fellowship. The application process is through the Hospital for Sick Children directly. Applicants should forward the following documents electronically to the Division of Orthopaedics Administrator:
- Curriculum vitae, photograph, personal statement (500 word limit),
- three letters of reference.

All complete applications are reviewed by the orthopaedic faculty, and short-listed candidates will be contacted for a series of telephone interviews. The orthopaedic faculty meet to adjudicate on all candidates interviewed. The short-listing process, interviews and notification of successful candidates takes place two years prior to the start date of the fellowship. All applicants will be notified of the status of their application at this time.
The Division of Orthopaedic Surgery prides itself on training fellows from all over the world. Canadian and/or American medical exams (i.e., MCCEE, USMLE, etc) are not required for application to our fellowship program. Applicants should have completed advanced training in orthopaedics and obtained certified specialization in the subject, e.g FRCS (Tr and Orth).

**WORK PERMIT**

Prospective clinical fellows must be eligible for a Canadian work permit. For eligibility information please see the Citizenship and Immigration Canada website. www.cic.gc.ca

Once a SickKids Job Offer has been completed and returned to us, you may then apply for a Canadian work permit. The following documents will need to submitted:

- **A Letter of Eligibility and a Letter of Employment:**
  These letters will be sent to you by the University of Toronto Postgraduate Medical Education office (PGME). www.pgme.utoronto.ca

- **Proof of Medical Examination:**
  You may be required to undergo a medical examination by a Canadian Government designated physician.

- **CPSO License Application:**
  You are required to apply for a College of Physicians and Surgeons of Ontario (CPSO) license before your arrival. It is recommended to begin this process at the same time as your work permit application. Please see the website for application instructions. www.cpso.on.ca

- **Proof of no criminal record:**
  You may be required to provide a Police Clearance Certificate.

Our office is available to assist you in completing your work permit and licensure applications. Our office is also able to link fellows with a professional relocation agent to assist with finding suitable accommodation for the duration of their fellowship.
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