

ANNUAL ACHIEVEMENTS REPORT 2009-2010

The Office of Pediatric Surgical Evaluation and Innovation



PARTNERSHIP
INTEGRITY
CURIOSITY
ENTHUSIASM
ACHIEVEMENT
SERVICE



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Divisional/Departmental Academic Achievements

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| Pediatric Cardiovascular and Thoracic Surgery | 12 |
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"OPSEI is committed
to training tomorrow's
health care professionals
today!"

THE OFFICE OF PEDIATRIC SURGICAL EVALUATION AND INNOVATION

OPSEI Team 2009-2010



Dr. Geoffrey Blair, Chief of Pediatric Surgery, B.C. Children's Hospital
Responsible for site specific effective delivery of clinical services; strategic and policy advice; site medical administration; quality monitoring and improvement; support for teaching and research.



Mr. Damian Duffy
Executive Director
Responsible for all OPSEI business operations and overall program management.



Mr. Stoney Chen
Operations Research Analyst
Responsible for conducting various operations research studies and projects to improve hospital efficiencies and patient quality of care.



Mrs. Bindy Sahota
Academic Administrative Assistant
Responsible for all academic support to the Pediatric Surgeons and coordinates undergraduate and postgraduate training programs.



Mr. Amin Mardan, Site Lead, Canadian Pediatric Surgical Wait Times Project
Responsible for maintaining surgical database used for various research studies and projects.



Mr. Nathan O'Hara
Program Coordinator
Responsible for academic and research activities and coordination of global health initiatives.

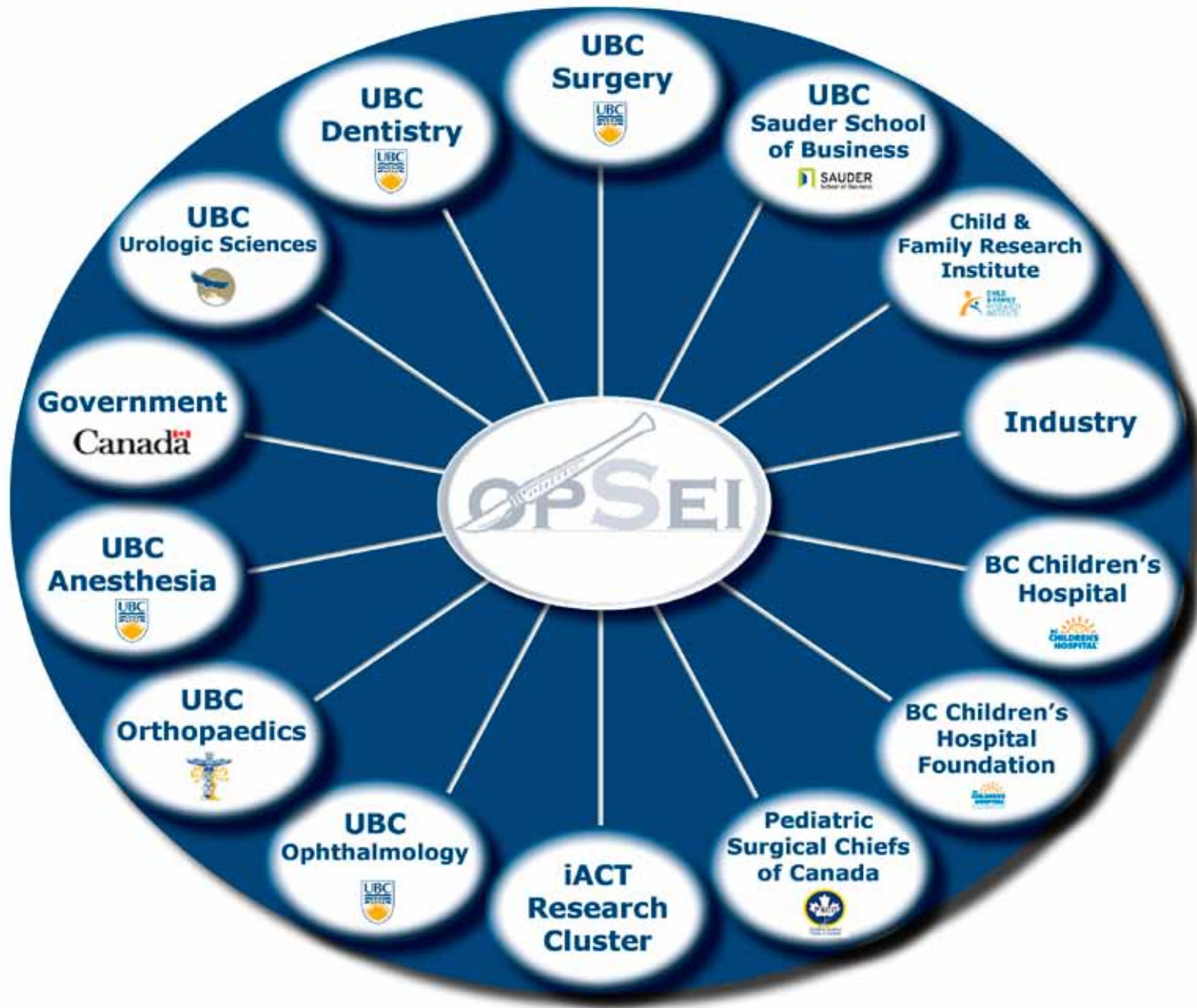


Ms. Anky Lai
Science Coop Student
Responsible for assisting operations research analyst and providing project support.



Ms. Cedric Miao
Science Coop Student
Responsible for assisting operations research analyst and providing project support.

PARTNERS IN PEDIATRIC SURGICAL INNOVATION



CLINICAL RESEARCH AND EDUCATION

On April 1, 2010, the Office of Pediatric Surgical Evaluation and Innovation celebrated its 5th Birthday! OPSEI continues to support an environment which supports student and faculty partnerships in clinical research and education. In 2009, the Department of Pediatric Surgery at BC Children's Hospital hosted 29 summer students which was a record for us. Students and their faculty mentors were involved in clinical research projects ranging from safe sharps handling to outcomes evaluation in epilepsy surgery. Following the intensive summer research program, many students presented their projects at the Western Medical Student Research Forum.

Lights, Camera, Surgery Program

LIST OF VIDEOS PRODUCED BY PROGRAM IN 2009

Venous Access Device Insertion
Intubation
Nasogastric Tube Insertion
Intravenous Insertion
Flexible Diagnostic Cystoscopy
Pyeloplasty
Pediatric Circumcision
Suprapubic Catheterization
Robotic Prostatectomy
Ureteroscopy
Fine Needle Aspiration Thyroid Biopsy

Varicocele Repair
Atrial Septal Defect Repair
Thoracoscopy
Needlestick Injury
Excisional Biopsy
Closed Gowning and Gloving Technique
Open Gowning and Gloving Technique
Female Catheterization

Summer Students and Faculty Supervisors

| Name | Supervisor | Project Title |
|------------------|-------------|--|
| Jeremy Daniels | Reimer | Surgical Daycare Discharge Survey |
| Christine Sorial | Campbell | Cell-based gene therapy for pulmonary hypertension: Application of an established therapy in a neonatal model |
| Grace Truong | Giaschi | The typical and atypical development of motion-defined form perception in children |
| Emily Harrison | Giaschi | The typical and atypical development of stereopsis in children |
| Eugene Choo | Montgomery | Emergence Delirium in Children: Total Intravenous Anesthesia with Propofol + Remifentanyl Versus Inhalational sevoflurane Anes |
| Leila Shobab | Butterworth | Transfusion practices in pediatric trauma patients in intensive care settings |

| | | |
|--------------------|-----------------------|---|
| David Tso | Butterworth | Video-analysis of sharps safety practices of general surgical residents |
| Jake Hayward | Giaschi | Predicting occlusion therapy outcomes for children with amblyopia |
| Britteny Turko | Cochrane | Time course of the resolution of syringomyelia following Decompression of Chiari Malformation |
| Anky Lai | Blair | Canadian Pediatric Surgical Wait Times Initiative |
| Karan Grewal | Courtemanche | Complex Neurofibromas of the Scalp |
| Andrew Battison | Singhal | Pediatric Epilepsy Surgery: Development of Family-Centered Outcome Tools |
| Daria Krivosheya | Steinbok | Lesionectomy versus lesionectomy plus electrocorticographically guided cortical resection for lesional epilepsy |
| Tin Jasinovic | Leblanc | Evaluation of Tetralogy of Fallot outcomes |
| Chris Wu | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |
| Kelvin Kwan | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |
| Christopher Wallis | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |
| Jacksy Zhao | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |
| David Youssef | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |
| Cyrus McEachern | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |
| Pamela Verma | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |
| Stephanie Wise | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |
| Hayley Merkeley | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |
| Justin Chen | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |
| Meghan Gilley | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |
| Andrea Human | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |
| Aman Taggar | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |
| Simon Jones | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |
| Tyler Fraser | Blair/Masterson/Duffy | Lights, Camera, Surgery + Development of PBL On-Line Cases |

Problem-Based Learning Resources Authored by UBC Medical Students through the Teaching and Learning Enhancement Fund Grant (Project Supervisor: Dr. John Masterson)

| Author | Title |
|---|--|
| Butterfield M, Masterson JST | Pediatric Inguinal Hernia. |
| Butterfield M, Robinson M, Hampole R, Chang-Kit L | Urologic Manifestations of Diabetes |
| Butterfield M | Genuine Stress Incontinence |
| Cavanagh A | Peyronie's Disease. |
| Chu K, Verma P, Longpre M, Nguan C | Chronic Renal Failure |
| Chu K | Urologic Complications of Crohn's Disease |
| Chu K | Urologic Dermatology and Sexually Transmitted Infections |
| Clarke K | Pyonephrosis |
| Eftekhari A, Sharifi S, Mayson B, Nguan C | Renovascular Hypertension |
| Eftekhari A, Mayson B, Masterson JST | Pediatric Voiding Dysfunction |
| Fraser T, Gotto G, Afshar K | Enuresis |
| Fraser T, Hennessey K, Chew B | Recurrent Urinary Tract Infections in a Quadriplegic Patient |
| French D, Chew B, Ottem D | Renal Trauma |
| Human A, Sutton R, Chew B | Kidney stones in a Teenage Patient - Cystinuria |
| Kassam Z, Butterfield M, Chang-kit L, Paterson RF | Genitourinary Tuberculosis |
| Kohli K, French D, Seth A, Chow V | Male Infertility / Azoospermia |
| Kohli K, Verma P, Kavanagh A, MacNeily A | Megaureter |
| Kohli K | Male Infertility: Assisted Technology |
| Merkeley H, Clarke K, Longpre M, MacNeily A | Urolithiasis in Pregnancy |
| Merkeley H, Kohli K, Robinson M, Mayson B, Jamieson C | Bacteruria in Pregnancy |
| Merkeley H, Moosavias S, Mayson B, Poon K | Mrs Detruse: A Case of Overactive Bladder |
| Moosavias S | Parkinson's Disease and Urgency Incontinence |

| | |
|--|---|
| Shimizu J, Hoag C, Leone E | Priapism |
| Shimizu J, Marks A, MacNeily A | Posterior Urethral Valves |
| Shimizu J, Rapoport D, Goldenberg SL, Masterson JST | Prostate Cancer Screening |
| Shimizu J, Wise S, Faddegon S, Afshar K | Foreskin abnormalities: Phimosis and Paraphimosis. |
| Verma P, Afshar K | Vesicoureteral Reflux causing Pediatric Urinary Tract Infection |
| Verma P, Clarke K, Robinson M, Hampole R, McCracken J | Treatment and Diagnosis of Post-renal Acute Renal Failure |
| Verma P, Wu C, Buchan N, Goldenberg SL | Treatment Options for Localized Prostate Cancer – Robotic Radical Prostatectomy |
| Verma P, Wu C, Faddegon S, Masterson JST | Diagnosis and Treatment of Hypospadias |
| Wallis CJD, Chang-kit L, Nigro M | Prostatitis |
| Wallis CJD, Choi K, Seth A, Teichman J | Interstitial Cystitis |
| Wallis CJD, Chu K, Faddegon S, Nigro M | Incontinence after Radical Prostatectomy |
| Wallis CJD, Clarke K, Pelman A, Masterson JST | The Acute Scrotum |
| Wallis CJD, Fraser T, Sea J, Goldenberg SL | Gross Painless Hematuria and Dysuria |
| Wallis CJD, Kohli K, Longpre M, Jonat I, Afshar K | Antenatal Hydronephrosis |
| Wallis CJD, Kohli K, Samarasekera D | Von-Hippel Lindau and Renal Carcinoma |
| Wallis CJD, Shimizu J, Vawda A, Masterson JST, Poon K, Vawda A | Benign Prostatic Hyperplasia |
| Wallis CJD, Wong W, Marks A, Afshar K | Wilms' Tumor |
| Wallis CJD, Wong W | Male Urethritis |
| Wong W, Choi K, Hoag C, So A | Management of Incidental Renal Masses |
| Wong W, Choi K, Jonat K, Masterson JST | Undescended Testes |
| Wong W, Metcalfe C, So A | Urinary Diversion Post-Cystectomy |
| Wong W | Andropause |
| Wong W | Chronic Urinary Retention |
| Wong W | Renal Cystic Disease |
| Youssef D, Choi K, Samarasekera D, Chew B | Renal Colic |
| Youssef D, Clarke K, Mayson B, Masterson JST | Ectopic Ureter and Dribbling Incontinence |

National Pediatric Surgical Wait Time Project

The National Pediatric Surgical Wait Time Project is an unprecedented collaborative venture of sixteen Pediatric Academic Health Science Centres. Its main goal was to measure the burden of surgical wait times for Canada's children and youth. One of the first tasks of this project was to conduct a survey in order to understand the current clinical pathways at BCCCH and across the country that provide recourse for patients with excessive wait times. Canada-wide, excessive wait times for patients prior to surgery appear to be the most pressing problem for waitlist management. However, prior to this project there was no quantitative evidence to support that hypothesis.

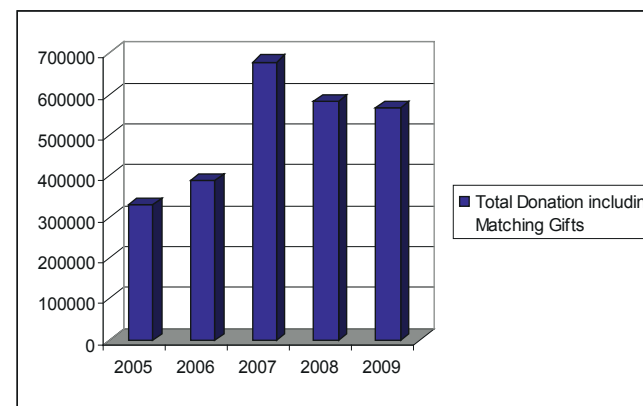
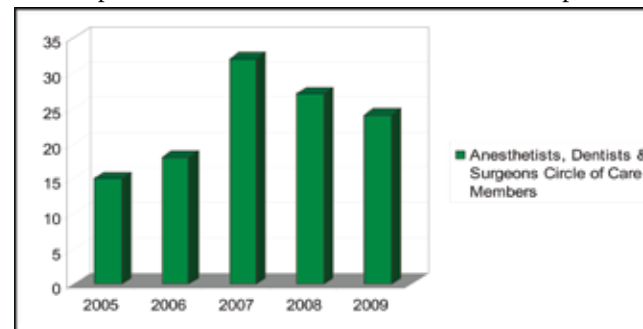
The milestones for this project to date are as follows:

- Data is submitted to the national office on a monthly basis. The national office uses our data to anonymously benchmark our performance across the country in similar surgical services
- This project has allowed us to allocate resources to correctly identify root causes for waitlist data contamination issues and to help with data maintenance strategies which are monitored on a monthly basis
- This is in line with the Ministry of Health mandate to conduct continuous reviews of the waitlist
- Development of a standard form for all surgical services to use across the site. The form is custom-designed for each service so that the procedures specific to the service are outlined and their unique access targets are automatically flagged when a diagnosis is selected
 - * For example: if a patient is diagnosed with "Cleft Lip Palate", then based on the P-CATS access target that is determined by a list of more than 100 surgeons across Canada, we can conclude that this patient should have surgery in the next 3 weeks. If a patient waits longer than this access target, they are flagged by the surgical department so that the resources are re-aligned to facilitate this surgery.
- Received the 2009 Gold Leadership Award, in the Healthcare Category, from the Institute of Public Administration of Canada.

Children's Circle of Care and the Hospital Matching Program

Each year, we work collaboratively with the BC Children's Hospital Foundation to raise funds through the Hospital Family Matching Gift Program in order to support and advance our patient care, research, and education mission.

I am extremely pleased to share with you that we have had a total of 25 donors contribute to the Children's Circle of Care Program within the Departments of Pediatric Anesthesia, Pediatric Dentistry and Pediatric Surgery for 2010. Moreover, it is especially a pleasure to report that we are warmly welcoming 5 new physician donors to the Children's Circle of Care Program. Their generous donations, along with the matching gifts, have raised a total of \$565,635. I would also like to take this opportunity to thank Ms. Janice Williams and the whole BC Children's Hospital Foundation team who facilitate the Children's Circle of Care Program. Clearly, their important work has and will continue to make a difference in the care we provide to children and families at our hospital.



SHARING THE CARE GLOBALLY

Uganda Hearing Health Care Program

The Uganda Hearing Health Care Program began when Dr. Irwin Stewart first visited Uganda in 2000. A year later, he recruited otolaryngologist Dr. Brian Westerberg (BC Children's Hospital, St. Paul's Hospital) to the first team trip to Uganda aiming to determine the prevalence and causes of hearing loss. In subsequent trips Dr. Westerberg treated patients who were deaf or had difficulty hearing by both medical and surgical means. However, the project has always included more than just ear surgery it has also developed water and sanitation projects in Arua under the guidance of Mr. Michael Crean.

The goal has always been to train the trainers through the education of local Otolaryngology Surgeons (Ear, Nose and Throat Surgeons) and to supply them with donated equipment needed for ear surgery, thus allowing ultimately for independent practice in Uganda. The program ultimately strives to create a sustainable system for the people of Uganda. Recently, the project has expanded considerably to include a broader range of health and educational services with the addition of experienced personnel in Nursing, Biomedical Engineering and Anesthesiology.

In 2009, OPSEI executive director Damian Duffy joined the group for their October trip. The group saw 92 patients in 10 clinic days in four centers. Surgeries were done on 10 days in four different centers, always in conjunction with local Otolaryngologists being instructed/assisted in provision of care for otolaryngologic disorders.

The main health concerns addressed were chronic ear infections complicated by perforated ear drums and ear drainage issues. For the pediatric patients this was particularly problematic as it negatively impacted both school learning activities and social development with other children. The team even witnessed occasions in which children no longer attended school. Students were either sent home by the teacher or chose not to attend class hoping to avoid teasing

from their peers because of ear discharge.

Additionally, other ENT surgical conditions were seen and treated. These conditions included masses of the neck, nose and sinus. Procedures which were undertaken were done in concert with the local Ugandan surgical team.



Uganda Sustainable Trauma Orthopaedic Program

The burden of injury is a public health issue felt across all geographic and socioeconomic boundaries. Injury related deaths in sub-Saharan Africa outnumber all deaths from HIV, TB, and malaria combined. The numbers are particularly troubling in Uganda, which currently ranks second worldwide behind Ethiopia in the rate of fatalities per vehicle.

The Uganda Sustainable Trauma Orthopaedic Program was established in 2008, as a collaboration between the University of British Columbia and Makerere University in Kampala, Uganda to reduce the burden of neglected orthopaedic trauma in the country. The program is coordinated by OPSEI administrator, Nathan O'Hara.



During the most recent trip in October 2009, a medical team consisting of two orthopaedic surgeons, one anesthesiologist, two orthopaedic surgical residents, one anesthesia resident, three nurses and a sterilization technician worked with local staff of Mulago Hospital to analyze and strengthen the current system for managing traumatic injuries. Policies are changing to ensure that injured patients receive direct admission to the surgical wards. These changes have resulted in the average wait time for isolated femoral head fractures decreasing from 30 days to 2 days.

With over half of the Ugandan population under the age of 15, many of patients admitted during the program require pediatric care. UBC residents familiar with the modern techniques play an important role in training their peers during these visits.

The group is currently planning their next visit for November 2010.

GHI Honduras

The University of British Columbia Global Health Initiative (GHI) is a student-run group dedicated to addressing the need for global health education and skills training in India, Uganda, Kenya and Honduras. The GHI Honduras rural health project sent its first group of medical students to the rural community of Santiago in the province of La Paz, Honduras, in 2007. The project collaborates with a local Honduran Non-Governmental Organization, PRODIM (Project for the Development of Mothers and Children).

This year the Honduras oral health education program was partially sponsored by the Office for Pediatric Surgical Evaluation and Innovation. This was the first year that oral health education was provided in the communities after the communities had suggested the added program on previous visits. The 2010 oral health care project has 3 components:

- A brief survey of oral health care practices for mothers of young children and women of child-bearing age.
- Oral health care education for
 - a. children through the schools, and
 - b. for mothers and young women (possibly in conjunction with the women's health educational sessions)
- Sealant or fluoride varnish treatments for children.

Resident training – Uganda

The University of British Columbia's Division of Otolaryngology and the Department of Anesthesia, Therapeutics and Pharmacology supported two outstanding residents from Makerere University in Uganda for three month training electives.

Dr. Emily Kakande

Dr. Kakande is in her final year of residency training in Uganda, specializing in Otolaryngology. During her time at UBC, Emily has had the opportunity to train at BC Children's Hospital, St. Paul's Hospital and Vancouver General Hospital under some of the leading experts in the field. Dr. Kakande has also undertaken research on the link between autism and hearing loss.



Dr. Specosia Mbula Kimenye

Dr. Specosia (Specky) Mbula Kimenye is in her final year of the Anesthesia residency program at Makerere University in Uganda. Dr. Kimenye is the second resident from Uganda to join the Anesthesia residency program at the University of British Columbia for a three month elective. During her stay in Vancouver, Specky participated in a one month pediatric anesthesia rotation, one month at St. Paul's ICU rotation, three weeks of general anesthesia at Vancouver General Hospital and one week of general anesthesia and pain at St. Paul's hospital. Dr. Kimenye is currently involved in two research studies; the development of a pain assessment and treatment for use in patients having lower limb orthopaedic surgery and the development of a pulse oximeter for low resource areas.



2010 Clinton Global Initiatives University

The William J. Clinton Foundation hosted its third annual Clinton Global Initiatives University meeting on April 16-18th, 2010 at the University of Miami. The meeting brought together students, university presidents, and national youth organizations to create and implement Commitments to Action across five Global Challenge Areas: Education, Environment & Climate Change, Peace & Human Rights, Poverty Alleviation, and Public Health.

OPSEI administrator, Nathan O'Hara, was invited to participate in this year's meetings and presented on his work on removing the barriers to surgical care in Uganda. Nathan also received an award for Outstanding Leadership in Global Initiatives from the Foundation.

ACADEMIC ACHIEVEMENTS

Academic Presentations:

- “Sharps handling practices among junior surgical residents – a video analysis” Mr. David Tso, UBC Medical Student, Division of Pediatric General Surgery
- “Seizure outcomes of lesionectomy with and without intraoperative electrocorticography in children with lesional epilepsy” Mr. Andrew Battison, UBC Undergraduate Student, Division of Pediatric Neurosurgery
- “Infant arachnoid cysts have a different natural history than arachnoid cysts in later childhood” Ms. Daria Krivosheya, UBC Medical Student, Division of Pediatric Neurosurgery
- “Complex neurofibromas of the scalp: a case series” Mr. Karan Grewal, UBC Medical Student, Division of Pediatric Plastic Surgery
- “The value of anatomic visualization provided by magnetic resonance imaging in surgical planning for cases of aberrant anatomy” Mr. Christopher Wallace, UBC Medical Student, Division of Pediatric Urology
- “University of British Columbia on-line PBL cases hosted on DiagnosisX: The students’ perspective” Ms. Meghan Gilley, UBC Medical Student, Division of Pediatric Urology
- “iClicker: Trial study at the University of British Columbia Medical School Ms. Stephanie Wise, UBC Medical Student, Division of Pediatric Urology
- “Lights, Camera, Surgery: Evaluation of a pilot project for medical students to produce surgical education learning resources” Mr. Kelvin Kwan, UBC Medical Student, Division of Pediatric Urology

- “A clinical review of Tetralogy of Fallot and its variants: Assessment of peri-operative outcomes” Mr. Tin Jasinovic, UBC Undergraduate Student, Division of Pediatric Cardiac Surgery

The following educational project was presented at the Canadian Council on Medical Education

- “On-line PBL cases hosted on DiagnosisX: The Students’ perspective” Ms. Stephanie Wise, UBC Medical Student, Division of Pediatric Urology



Honours and Awards:

- 2009 Public Sector Leadership Award
Dr. Geoffrey Blair, Mr. Stoney Chen, Mr. Amin Mardan
- 2010 Excellence in Education Award of Distinction, BC Children’s Hospital
Dr. John Masterson, Division of Pediatric Urology
- Needlestick Injury Protocol Video – Nomination Canadian Health Care Symposium 2009 Golden Safety Pin Award in Ottawa

Ms. Meghan Gilley, UBC Medical Student, Division of Pediatric Urology

- W.B. and M.H. Chung Research Day Award – Best Video
Presentation: Mr. Justin Chen, UBC Medical Student, Division of Pediatric General Surgery
- W.B. and M.H. Chung Research Day Award – Best Video
Presentation: Mr. Christopher J. D. Wallace, UBC Medical Student, Division of Pediatric Urology
- W.B. and M.H. Chung Research Day Award – Best Video
Presentation: Mr. Jacksy Zhao, UBC Medical Student, Division of Pediatric General Surgery
- Outstanding Leadership in Global Initiatives
Mr. Nathan O'Hara, Clinton Foundation – Clinton Global Initiatives

Committee Participation

| Name | Committee |
|-----------|--|
| D. Duffy | Member, BC Children's Hospital United Way Fundraising Committee |
| | Executive Director, Pediatric Surgical Chiefs of Canada |
| | Chair, BC Children's Hospital Foundation Fellowship Allocation Committee |
| | Member, Pediatric Surgical Executive Committee |
| | Member, Pediatric General Surgery Residency Training Committee |
| | Member, BC Children's Hospital Excellence in Education Awards Committee |
| | Member, Executive Committee, Innovations in Acute Care and Technology Research Cluster, CFRI |
| | Member, Advocacy Committee, UBC Association of Administrative and Professional Staff |
| B. Sahota | Member, Executive Committee, Innovations in Acute Care and Technology Research Cluster, CFRI |
| | Member, Pediatric General Surgery Residency Training Committee |

Grant Funding Received:

- “Supporting On-Line Learning through the development of surgical education videos”
UBC Summer Student Internship Award - \$3,200 Dr. Geoffrey Blair, Mr. Damian Duffy, Dr. John Masterson
- “Wrap-Up and Editing of Online Teaching Resources in Urology”
UBC Teaching and Learning Enhancement Fund - \$9,120.00
Dr. John Masterson, Dr. Larry Goldenberg, Dr. Kourosh Afshar, Dr. Jennie Mickelson
- “Lights, Camera, Surgery: Production of Surgical Videos within the OR Setting”
UBC Summer Student Internship Award - \$25,900 Dr. Geoffrey Blair, Mr. Damian Duffy, Dr. John Masterson
- “Lights, Camera, Safety”
Partnership with the BC Patient Safety and Quality Council - \$4,020
Dr. John Masterson, Mr. Damian Duffy
- “Capacity Building Award”
Child and Family Research Institute - \$40,000 Dr. Geoffrey Blair, Mr. Damian Duffy, Dr. John Masterson, Ms. Lori Nelson
- Branch for International Surgery
Resident Research Grant - \$2,500 Dr. Paul Mick, Dr. Brian Westerberg, Mr. Damian Duffy
- Auxiliary to BC Children's Hospital
Global Health Scholarship – Uganda Hearing Health Program - \$2,000 Mr. Damian Duffy, Dr. Brian Westerberg

Total \$86,740

PEDIATRIC CARDIOVASCULAR AND THORACIC SURGERY



Dr. Sanjiv Gandhi
Division Head



Dr. Andrew
I.M. Campbell



Dr. Nathalie Roy



Ms. Celia Magraw

Academic Highlights

TEAM: 2009-10

Faculty:

Dr. Sanjiv Gandhi, Division Head

Dr. Andrew I.M. Campbell

Other Staff Members

Celia Magraw, Administrative Assistant



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HIGHLIGHTS AND ACHIEVEMENTS

2009 was a particularly momentous year for the division of Pediatric Cardiovascular and Thoracic Surgery with the retirement of Dr. Jacques Leblanc who led the division for over 15 years and worked tirelessly to promote cardiac care for all of British Columbia's children over his 25 year tenure. With the dedication of all staff, and in particular ICU nursing, the division was able to perform over 180 open-heart procedures and a total of 305 cases during 2009. During 2009, Dr. Leblanc continued to work with the staff at Fudan Children's Hospital in developing and formalizing a curriculum for the education of surgeons, cardiologists, anesthetists, and nurses caring for cardiac children both in Shanghai and in outlying centres. Following Dr. Leblanc's departure, Dr. Nathalie Roy was hired as a locum surgeon during the following 7 months while awaiting the recruitment of a second full-time surgeon. The division was therefore very pleased when Dr. Sanjiv Ghandi was successfully recruited to the position of Head in February of 2010 and we look forward to his arrival at BC Children's in July of this year.

PRESENTATIONS

1. Dr. Andrew Campbell "Infection and White Matter Injury in Infants with Congenital Heart Disease." Pediatric Academic Society Annual Meeting. 2009.
2. "Vocal Fold Immobility Following Cardiothoracic Surgery in Children." American Society of Pediatric Otolaryngology Annual Meeting. Las Vegas, Nevada. May 1, 2010.

LECTURES:

1. Dr. Andrew Campbell "Pulmonary Gene Transfer: The future is NO(W)." Pediatric Grand Rounds. BC Children's Hospital, Vancouver, British Columbia. May 1, 2009.

FORMAL TEACHING:

Dr. Campbell

1. ECLS Course. Instructor. BC Children's Hospital, Vancouver BC, Sept 28-30, 2009.
2. Congenital Cardiovascular Pathology Lab. UBC Medical School Vancouver BC, March 2010
3. PBL tutor, First year - Cardiovascular Block. UBC Medical School, February – March 2010
4. Professor's Rounds. Cardiovascular Surgical Residents. April 2010

PUBLICATIONS APR 1, 2009 TO MAR 31, 2010

1. **LeBlanc JG**. "New surgery for better outcomes: Shaping the field of congenital heart disease." World Journal of Pediatrics. vol.5, May 2009.
2. **LeBlanc JG**. "Creating a global climate for pediatric cardiac care." World Journal of Pediatrics. vol 5.2. May 2009.
3. Jeewa A, Pitfield AF, Potts JE, Soulikias W, DeSouza ES, Hollinger AJ, Sandor GG, **LeBlanc JG**, **Campbell AM**, Sanatani S. "Does

biventricular pacing improve hemodynamics in children undergoing routine congenital heart surgery?" Pediatric Cardiology. 2010 31:181-187.

4. Block AJ, McQuillen PS, Chau V, Glass H, Poskitt KJ, Barkovich AJ, Esch M, Soulikias W, Azakie A, **Campbell A**, Miller SP. "Clinically silent preoperative brain injuries do not worsen with surgery in neonates with congenital heart disease." Journal of Thoracic Cardiovascular Surgery. 2010 Apr 28.

SUCCESSFUL GRANT FUNDING

| Project Title | PI | Team | Granting Agency | Amount |
|---|------------|------------------------|---|---------|
| Cell-based gene therapy for pulmonary hypertension: Application of an established therapy in a neonatal model | Campbell A | Other Faculty involved | Child and Family Research Institute Summer Student Research Program Competition | \$4,048 |



| | |
|--|--|
| Fellows Supervised | <i>Dr. Gang Chen</i> , Shanghai, P.R. China |
| Residents Supervised | <i>Osama Ben Hameid</i> , MD, 2009, UBC Cardiovascular and Thoracic Surgery, Clinical Fellow |
| | <i>Hossein Shayan</i> , MD, 2009, UBC Cardiovascular and Thoracic Surgery, Clinical Fellow |
| Students <i>1st and 2nd year medical students</i> | <i>Justin Chen</i> <i>Bahman Sotoodian</i> <i>Jeff Gong</i> <i>Pavel Glaze</i> <i>Steven Co</i> |
| Clinical Clerks | <i>Jennifer Chung</i> , 4th yr – University of Calgary <i>Matthew Frey</i> , 4th yr – UBC <i>Sophia Wong</i> , 4th yr – UBC <i>Mikyla Richards</i> , 4th yr – UBC |
| Research Students | <i>Tin Jasinovic</i> : A clinical review of tetralogy of fallot and its variants: Assessment of perioperative outcomes. |
| | <i>Yvan Mivelaz</i> : Improvement in the screening of congenital heart diseases: a 28-yr retrospective study. |
| | <i>Pamela Verma</i> : Pulmonary Artery Sarcoma: A case report and review of surgical outcomes. |
| | <i>Christine Sorial</i> : Animals models of neonatal pulmonary hypertension. |
| | <i>Jaipreet Mattu</i> : National congenital cardiac database development. |

COMMITTEE PARTICIPATION

Dr. Andrew Campbell

1. Credentials Committee, BC Children's Hospital, Member
2. Careers in Action, Career Counseling Program, Faculty of Medicine, University of British Columbia, Mentor
3. ECLS Steering Committee, BC Children's Hospital, Member
4. ECLS Working Group Committee, BC Children's Hospital, Member
5. University of British Columbia Cardiac Surgery Residency Program Committee, Member
6. Cardiac Quality Assurance Committee, BC Children's Hospital, Co-Chair
7. Western Canadian Children's Heart Network, Member





Dr. Douglas
Johnston Division/
Dept Head

THE DEPARTMENT OF PEDIATRIC DENTISTRY

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Academic Highlights

TEAM: 2009-10

Faculty:

Dr. Douglas Johnston Division/Dept Head
Dr. Phoebe Tsang, Staff Pediatric Dentist
Dr. Jong-Hyun Ban, Pediatric Dentist
Dr. Karen Campbell, full time tenure track pediatric dentist
Dr. Anita Gartner, Pediatric Dentist

Other Staff Members

Dr. Clive Bethel, Associate GP
Dr. Martin Braverman, Active oral and maxillofacial surgeon
Dr. Mark Casafrancisco, Active pediatric dentist
Dr. Anabel Chan, Active pediatric dentist
Dr. Peter Chan, Active pediatric dentist
Dr. Brian Chanpong, Active anesthesiologist
Dr. Wa S. Cheung, Active pediatric dentist
Dr. Sam Chiang, Consulting pediatric dentist
Dr. Ed Chin, Active pediatric dentist
Dr. Jeff Coil, Active endodontist
Dr. Lisa Coveney, Active pediatric dentist
Dr. Hasnain Dewji, Active pediatric dentist
Dr. Leo Fung, Active prosthodontist
Dr. Rosamund Harrison, Active pediatric dentist
Dr. Paul Helpard, Consulting orthodontist
Dr. Bon Bob Hu, Associate GP
Dr. Robin Jackson, Active orthodontist
Dr. Richard Kramer, Active pediatric dentist
Dr. Young Kuah, Active orthodontist and pediatric dentist

Dr. Louisa Leung, Provisional active pediatric dentist
Dr. Angelina Loo, Active orthodontist
Dr. William MacDonald, Active oral and maxillofacial surgeon
Dr. Eugene Marks, Active oral and maxillofacial surgeon
Dr. Resa Nouri, Active pediatric dentist
Dr. Gerry Pochynok, Active pediatric dentist
Dr. Mark Reichman, Active oral and maxillofacial surgeon
Dr. Donal Scheideman, Active pediatric dentist
Dr. Ronald Slemko, Active oral and maxillofacial surgeon
Dr. Dorothy Sonya, Active orthodontist
Dr. Esther Tam, Active endodontics
Dr. Isaac Tam, Active pediatric dentist
Dr. Tim Tam, Active pediatric dentist
Dr. Wendy Tang, Active pediatric dentist

HIGHLIGHTS AND ACHIEVEMENTS

The department is involved with the PACS 430 course from UBC and 2 undergraduate students observed and performed minor procedures for 3 weeks.

Dr. Rosamund Harrison, professor and chair of the Department of Pediatric Dentistry at UBC, has won the 2010 3M ESPE – ACFD National Dental Teaching Award for her outstanding work in dental education both locally and nationally. As division chair of Pediatric Dentistry, her interests are focused on low-income new-immigrant communities that have a high rate of caries in pre-school children.

Dr. Joy Richman received highest marks for her CIHR grant and received \$1.5million in funding for her work in craniofacial development

Drs. Nureem Somani and Winnie Chan received first prize for their research and presentation at the Annual Resident's Day at the Diamond Centre, VGH

PRESENTATIONS

1. Development of the Graduate Program in Pediatric Dentistry. Senate. UBC. March, 2010. D. Johnston
2. Emergency dental treatment for emergency care physicians. BCCH. January, 2010. D. Johnston
3. The new Graduate Program in Pediatric Dentistry. How to develop a program from the ground up. University of Winnipeg, Dental Chief's of Pediatric Dentistry. April, 2010
4. Effect of specific medications on salivary density, Annual Residents Day, Diamond Centre, VGH

PUBLICATIONS APR 1, 2009 TO MAR 31, 2010

1. Lui L, Levinson JN, Noël G, Handrigan GR, **Richman JM**, El-Husseini A, Moukhles H. Synaptic localization of neuroligin 2 in the rodent retina: comparative study with the dystroglycan-containing complex. *Journal of neuroscience research* 88, 837-849 (2010).

2. Higashihori N, Buchtova M, **Richman JM**. The function and regulation of TBX22 in avian frontonasal morphogenesis. *Dev Dyn* 239, 458-473 (2010).
3. Handrigan GR, **Richman JM**. Autocrine and paracrine Shh signaling are necessary for tooth morphogenesis, but not tooth replacement in snakes and lizards (Squamata). *Developmental biology* 337, 171-186 (2010).
4. Buchtová M, Kuo WP, Nimmagadda S, Benson SL, Geetha-Loganathan P, Logan C, Au-Yeung T, Chiang E, Fu K, **Richman JM**. Whole genome microarray analysis of chicken embryo facial prominences. *Dev Dyn* 239, 574-591 (2010).
5. Town L, McGlinn E, Fiorenza S, Metzis V, Butterfield NC, **Richman JM**, Wicking C. The metalloendopeptidase gene *Pitrm1* is regulated by hedgehog signaling in the developing mouse limb and is expressed in muscle progenitors. *Dev Dyn* 238, 3175-3184 (2009).
6. Szabo-Rogers HL, Geetha-Loganathan P, Whiting CJ, Nimmagadda S, Fu K, **Richman JM**. Novel skeletogenic patterning roles for the olfactory pit. *Development (Cambridge, England)* 136, 219-229 (2009).
7. Geetha-Loganathan P, Nimmagadda S, Antoni L, Fu K, Whiting CJ, Francis-West P, **Richman JM**. Expression of WNT signalling pathway genes during chicken craniofacial development. *Dev Dyn* 238, 1150-1165 (2009).

SUCCESSFUL GRANT FUNDING

| Project Title | PI | Team | Granting Agency | Amount |
|---|-----------------|------|-----------------|---------------|
| Craniofacial Growth and Development of the chick embryo | Dr. Joy Richman | | CIHR | \$1.5 million |

| | |
|----------------------|--------------------------------|
| Residents Supervised | Drs. Heba Alani and Elise Wong |
| | Dr. Andrew Leoni from VGH |
| | Dr. Michael Major from VGH |
| | Dr. Bora Moon from VGH |
| | Dr. Debbie Fonseca from VGH |
| | Dr. Angela Wong from VGH |

COMMITTEE PARTICIPATION

1. Desensitization of dental fears for the Autistic Child. Ms. Kayla Rogasin-Miller
2. Survey of the dental community's need for and access to dental general anesthesia facilities in BC

| | |
|----------------|--|
| Students | Two undergraduate dental students |
| Faculty Member | Ex-officio executive 'No Boundaries', The Hospital for Sick Children charitable surgical missions, Toronto |
| | Board member About Face International |
| | Expert panel member for the Pediatric National Wait List Study, representing pediatric dentistry |
| | Expert panel member for the provincial 'Help Line' |
| | Member SSAC, BCCH |
| | Member Medical Department Heads, BCCH |



DIVISION OF PEDIATRIC GENERAL SURGERY



Dr. Erik D. Skarsgard,
Division Head



Dr. Geoffrey K. Blair



Dr. Sonia A.
Butterworth



Dr. James J. Murphy



Dr. Eric M. Webber

Academic Highlights

HIGHLIGHTS AND ACHIEVEMENTS

Dr. Blair

- RCPSC Mentor of the Year RAC 1, Awarded February 2009, for 2008
- President, Canadian Association of Pediatric Surgeons- 2007-2009
- Chair, Pediatric Surgical Chiefs of Canada
- Chair, Royal College of Physicians and Surgeons of Canada Specialty Committee in Pediatric General Surgery

Dr. Butterworth

- Appointed Associate Program Director, UBC General Surgery Residency Program
- Performed first two laparoscopic diaphragmatic pacing procedures in children in Canada

Dr. Murphy

- Appointed Quality and Safety Head for Division of Pediatric General Surgery
- Best clinical paper award (2nd place) - 41st Annual Meeting of the Canadian Association of Pediatric Surgeons, Halifax, NS, September, 2009

Dr. Skarsgard

- Traveled to Scandinavia and UK as 2008 James IV traveler for Canada

Dr. Webber

- UBC Department of Surgery-grant tenure

TEAM: 2009-10

Faculty:

Dr. Erik D. Skarsgard,
Division Head
Dr. Geoffrey K. Blair
BCCH Surgeon-in-Chief
Dr. Sonia A. Butterworth
Dr. James J. Murphy
Dr. Eric M. Webber

Other Staff Members

Ms. Lynda Fynn
Ms. Robyn Walker
Ms. Jill Haynes
Ms. Susan Myhre
Ms. Kathy Robertson
Ms. Christine Adamson
Ms. Rozana Lee

PRESENTATIONS

Dr. Blair

1. "Appys, Access and Advocacy" Royal College of Physicians & Surgeons of Canada Speaker at the annual general meeting of the Canadian Pediatric Society, Ottawa, June, 2009
2. "The Pediatric Surgical Chiefs of Canada, presentation to the Organization of Children's Hospital Surgeons in Chief." American Academy of Pediatrics, Washington, DC, October, 2009

Dr. Skarsgard

3. "The Canadian Pediatric Surgery Network (CAPSNet)." The Southern Alberta Fetal Therapy Initiative (SAFTI) Annual Meeting. November 5, 2009, Calgary, AB (invited presentation)
4. "The Canadian Pediatric Surgery Wait Times Project. James IV Traveling Surgeon lecture. Great Ormond Street Hospital, London, UK. June 29, 2009 (invited presentation)
5. "CAPSNet: A national network for the study of surgical birth defects." James IV Traveling Surgeon lecture. Great Ormond Street Hospital, London, UK. June 29, 2009 (invited presentation)
6. "Fetal Gene Therapy." James IV Traveling Surgeon lecture. Great Ormond Street Hospital, London, UK. June 29, 2009 (invited presentation)
7. "CAPSNet: A national network for the study of surgical birth defects." James IV Traveling Surgeon lecture. John Radcliffe Infirmary, Oxford, UK. June 27, 2009 (invited presentation)
8. "Fetal Gene Therapy." James IV Traveling Surgeon lecture. John Radcliffe Infirmary, Oxford, UK. June 27, 2009 (invited presentation)
9. "CAPSNet: A national network for the study of surgical birth defects." James IV Traveling Surgeon lecture. Astrid Lindgren Children's Hospital, Stockholm, Sweden. June 24, 2009 (invited presentation)
10. "Fetal Gene Therapy." James IV Traveling Surgeon lecture. Astrid Lindgren Children's Hospital, Stockholm, Sweden. June 24, 2009 (invited presentation)
11. "CAPSNet: A national network for the study of surgical birth defects." James IV Traveling Surgeon lecture. Rikshospitalet, Oslo,

Norway. June 20, 2009 (invited presentation)

12. "Turn Left at the Pancreas: A Roadmap to a Career as a Surgical Clinician Scientist". Western Society of Pediatric Research Surgical Keynote Address. Carmel, CA Jan 29, 2009 (invited presentation)
13. "The Canadian Pediatric Surgery Network. Targeting Outcomes Improvement in Surgical Birth Defects." Department of Pediatrics Grand Rounds, January 15, 2010, BCCH
14. "CAPSNet." OPSEI Rounds. December 5, 2009, BCCH
15. "Pediatric Surgery as a career." Presentation to the UBC Undergraduate Medicine Surgical Club. October 14, 2009

Dr. Murphy

16. "Neonatal bowel obstruction and perforation due to human milk fortifier: A cause for concern." UBC Pediatric Resident Research Day. March 20, 2009
17. "Adhesive small bowel obstruction in children: Should we still operate?" 41st Annual Meeting of the Canadian Association of Pediatric Surgeons. Halifax, Nova Scotia. September 2009
18. "Adhesive small bowel obstruction in children: Should we still operate?" WB & MH Chung Lectureship. November 2009

Dr. Butterworth

19. "Is the need for fascial defect extension a predictor of adverse outcome in gastroschisis?" Halifax, NS. Oct 4, 2009 (poster presentation)
20. "Line Locks. Children's Intestinal Rehabilitation Meeting." Edmonton, AB. Dec 4, 2009 (invited presentation).
21. "Achalasia: Surgical Management." Advances in Pediatrics. Vancouver, BC Jan8, 2010 (invited presentation)
22. "Beware of Green Vomit: Surgical Emergencies in the Neonatal Period." Pediatric Update. Vancouver, BC. April 24, 2009 (invited presentation)
23. "Pediatric Trauma." Canadian Forces Medical Unit Training. Vancouver, BC. April 27, 2009. (invited presentation)
24. "Pediatric Trauma." Trauma Rounds, Royal Columbian Hospital. New Westminster, BC. Dec 17, 2009. (invited presentation)
25. "Diaphragmatic Pacing." Pediatric Grand Rounds. Vancouver, BC. Oct 9, 2009. (invited presentation)

LECTURES

FORMAL TEACHING

Drs. Blair, Butterworth, Webber

1. PBL tutors (Years 1 and 2) 45 hours each

Drs. Blair, Butterworth, Webber, Skarsgard

2. *Year 3 Seminars*
Bowel Obstruction in Children (8 hours)
Ambulatory problems in Pediatric Surgery (8 hours)

Drs. Blair, Butterworth, Skarsgard, Webber

3. INDE 420 GI clinical Skills (Physical Examination of the Abdomen)-4 hours

Dr. Murphy

4. *Year 3 seminars*
Surgery
Bowel obstruction in children – 2 hrs
Ambulatory Problems in Pediatric Surgery 4 hours
Pediatrics
Congenital anomalies – 6 hours
Core Surgery Residents
Principles of Surgery Review of Pediatric General Surgery – 2 hours

Dr. Butterworth

5. General Surgery Academic Half Day Seminars
Abdominal Pain in Children (3hours)
6. Pediatric Surgery for the General Surgeon (3 hours)
7. Advanced Trauma Life Support Course
Course Director (16 hours)
8. Neonatal Intensive Care Unit, Fellows Academic Half Day
Short Bowel Syndrome (2 hours)
9. Core Surgery Seminar
Pediatric Trauma (2 hours)

PUBLICATIONS APR 1, 2009 TO MAR 31, 2010

1. Grushka JR, Laberge JM, Puligandla P, **Skarsgard ED** and the Canadian Pediatric Surgery Network. The effect of hospital case volume on outcome in Congenital Diaphragmatic Hernia. *J Pediatr Surg* 44: 912-7, 2009
2. Boutros J, Regier M, **Skarsgard ED** and the Canadian Pediatric Surgery Network. Is Timing Everything? The Influence of Gestational Age and Intended and Actual Route of Delivery on Treatment & Outcome in Gastroschisis. *J Pediatr Surg* 44: 873-6, 2009
3. **Skarsgard ED**. Managing the adverse event occurring during elective, ambulatory pediatric surgery. *Semin Pediatr Surg* 18: 122-4, 2009
4. Mills JL, Lin Y, Macnab YC, **Skarsgard ED**. Does Overnight Birth Influence Treatment or Outcome in Congenital Diaphragmatic Hernia? *Am J Perinatol*. 2009 Oct 12. [Epub ahead of print]
5. **Skarsgard ED**. Does general surgery residency training provide competence in community-based pediatric surgery? *Can J Surg*. 2009 Oct;52(5):E220
6. Watson PH, Wilson-McManus JE, Barnes RO, Giesz SC, Png A, Hegele RG, Brinkman JN, Mackenzie IR, Huntsman DG, Junker A, Gilks B, **Skarsgard E**, Burgess M, Aparicio S, McManus BM. Evolutionary concepts in biobanking - the BC BioLibrary. *J Transl Med*. 2009 Nov 12; 7(1):95. [Epub ahead of print]
7. Mills JA, Lin Y, MacNab YC, Skarsgard ED and the Canadian Pediatric Surgery Network. *J Perinatol* 2010 Mar 1. [Epub ahead of print]
8. Chen J, Jamieson D, **Skarsgard ED**. Does Pre-biopsy contrast enema delay the diagnosis of long segment Hirschsprung's Disease? *J Investig Med* 58(1): 172. 2010
9. Chen J, **Skarsgard ES**, Jamieson D. Does pre-biopsy contrast enema delay the diagnosis of long segment hirschsprung's disease?" *J of Investigative Medicine*. Vol 58 Num 1, January 2010
10. Potter KJ, Abedini A, Marek P, Klimek AM, **Butterworth S**, Driscoll M, Baker R, Nilsson MR, Warnock GL, Oberholzer J, Bertera S, Trucco M, Korbitt GS, Fraser PE, Raleigh DP, Verchere CB. Islet amyloid deposition limits the viability of human islet grafts but not porcine islet grafts. *Proc Natl Acad Sci U S A*. 2010 Mar 2; 107(9):4305-10

11. Alfadhel M, Pugash D, Robinson AJ, **Murphy JJ**, Senger C, Afshar K, Armstrong L. Pre- and postnatal findings in a boy with duplication of the bladder and intestine: report and review. *Am J Med Genet A* 2009 Dec; 149A (12):2795-802
12. Stevens C, Lee JK, Sadatsafavi M, **Blair GK**. Pediatric thyroid fine-needle aspiration cytology: a meta-analysis. *J Pediatr Surg* 2009 Nov; 44(11):2184-91.
13. Tso D, Langer M, **Blair GK**, **Butterworth S**. Sharps handling practices among junior surgical residents – a video analysis. *J of Investigative Medicine*. Vol 58 Num 1, January 2010.



SUCCESSFUL GRANT FUNDING

| Project Title | PI | Team | Granting Agency | Amount |
|--|--|--|---|--------------|
| Canadian Pediatric Surgery Network (CAPSNET): Establishing Best Perinatal Practices for Gastroschisis and Congenital Diaphragmatic Hernia Using a Canadian Dataset | Skarsgard ED | | CIHR | \$100,000 |
| Non-viral vector mediated in utero gene therapy in mice: a novel experimental approach to the treatment of prenatally diagnosed cystic fibrosis | Skarsgard ED | | Canadian Cystic Fibrosis Foundation | \$49,900 |
| CIHR team in Maternal –Infant Care | Lee, SK Co-investigator: Skarsgard, ED | | CIHR | \$1,000,000 |
| Teaching, Learning Enhancement Fund | Blair, GK, Principal Investigator | Damian Duffy, John Masterson | UBC | \$25,000 |
| Canadian Paediatric Surgical Wait Times Project | Wright, J-PI; Blair, GK- Co-Investigator | Stoney Chen, Amin Mardan, Damian Duffy | Health Canada | \$12,500,000 |
| Use of Task Shifting to Expand the provision of Essential Surgical Services in Uganda | Luboga, S- PI; | Blair, GK- Consultant | International Development and Research Centre | \$350,000 |

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|----------------------|---|
| Fellows Supervised | <i>Arash Safavi</i> , MD (Iran), Clinical Research Fellow 2009-11 |
| Residents Supervised | <i>Andre Hodder</i> , MD, FRCSC (Canada), PGS resident 2008-10 |
| | <i>Monica Langer</i> , MD, FRCSC (Canada), PGS resident 2009-11 |
| Students | <i>Justin Chen</i> , UBC VMP Class of 2012 |

20. Surgical Suites Advisory Committee
21. Transfusion Medicine Subcommittee on Blood Contingency
22. Pharmacy and Therapeutics Committee
23. Director of Undergraduate Education – Division of Pediatric General Surgery

COMMITTEE PARTICIPATION

Dr. Skarsgard

1. Chair, Innovations in Acute Care and Technology (iACT) cluster-Child and Family Research Institute
2. Chair, Surgical Services Advisory Committee, BCCH
3. Member, Medical Advisory Committee, BCCH
4. Member, Surgical Services Advisory Council, BCCH
5. Member, Pediatric Surgical Executive Committee, BCCH
6. Surgical Chair, BCCH Mortality Review Committee
7. Co-chair, Surgical Research Committee, Dept of Surgery, UBC
8. Chair, Pediatric General Surgery Education Committee, UBC
9. Program Director, Pediatric General Surgery Training Program, UBC
10. Member Faculty Mentoring Program, Faculty of Medicine, UBC
11. Faculty Advisor, Harassment Awareness Workshop (orientation week), 1st year Medical and Dental undergraduate students
12. Head, Division of Pediatric General Surgery (UBC)
13. Member Surgical Advisory Council (UBC)

Dr. Murphy

14. UBC Department of Surgery Curriculum Group
15. UBC Clinical Faculty Appointment and Promotion Committee
16. BCCH Transfusion Committee
17. Resident Education Committee (Pediatric Surgery)
18. Surgical Suites Quality and Safety Committee
19. Child Safety and Quality of Care Committee



THE DIVISION OF PEDIATRIC NEUROSURGERY



Dr. Paul Steinbok,
Division Head



Dr. Doug D Cochrane



Dr. Ash Singhal

Academic Highlights

TEAM: 2009-10

Faculty:

Dr. Paul Steinbok, Division Head

Dr. Doug D Cochrane

Dr. Ash Singhal

Other Staff Members

Ms. Helen McGregor, Administrative Assistant

Dr. Vesna Popovska, Research Supervisor

Ms. Elysia Adams, Research Assistant

Mr. Andrew Battison, Research Assistant

PRESENTATIONS

Dr. Steinbok

1. "Clinical, radiologic and pathologic features and outcome following surgery for cervicomedullary gliomas in children." ASPN meeting, Hawaii. Jan 2009
2. "Posterior fossa tumours," "Spasticity treatment," "Sagittal synostosis," "Moya Moya," "Shunt complications," "Spinal lipoma." ISPN course, Havana, Cuba. February 12-14, 2009. Invited faculty.
3. "Occult tethered cord syndrome." Invited Bruce Hendrick lecturer. University of Toronto. May 29, 2009.
4. "Occult tethered cord syndrome," "Occipital Plagiocephaly," "Craniopharyngioma," "Treatment of spastic cerebral palsy." 8th Congress Brazilian Society for Pediatric Neurosurgery – guest speaker. Gramado, Brazil. June 18-20, 2009.
5. "Chiari I," "Occult filum terminale syndrome." World Congress of Neurosurgery – invited panelist. Boston, Massachusetts. August 31 – September 3, 2009.
6. "Cerebellar astrocytoma," "Coronal Synostosis," "Sagittal synostosis," "Shunt complications," "Spinal lipoma." ISPN course – invited faculty. Kolkata, India. November 5-6, 2009.

Dr. Cochrane

7. "Tools for Changing Governance Work: The Role of Safety Surveillance and Learning Systems." Ontario Hospital Association Webcast, Toronto. April 2009
8. "Alignment of health quality measurement: the way out of indicator chaos." CAHSPR, Calgary. May 2009
9. "Aligning for the Safety of Patients." Providence Healthcare Quality and Safety Conference, Vancouver. May 2009
10. "Orlando Andy Memorial Lecture - Cognitive and Affective Error in the Safety of Patients". Department of Neurosurgery University of Mississippi, Jackson MS. June 2009
11. "Provincial Priorities in Patient Safety & Quality Improvement." Society of Hospital Medicine, Vancouver. November 28, 2009

12. "Patient Safety Initiatives National and Provincial." Human Factor Perspectives on Safety Conference. Vancouver. November 30, 2009

Dr. Singhal

13. "Ventriculoperitoneal Shunt After Previous Endoscopic Third Ventriculostomy: Does ETV Improve Shunt Survival?" AANS Pediatric Section, San Diego, May 2009
14. "Pediatric Patients with Low Neurological Status/Fixed Pupils and AVM Hemorrhage: An Outcome Analysis." AANS Pediatric Section, San Diego, May 2009
15. "Infant Arachnoid Cysts have a Different Natural History than Arachnoid Cysts in Later Childhood." Pediatric Section AANS,

PUBLICATIONS APR 1, 2009 TO MAR 31, 2010

Dr. Steinbok

1. Steinbok P, Tidemann A, Miller S, Mortenson P, Bowen-Roberts T: Electrophysiologically guided versus non-electrophysiologically guided selective dorsal rhizotomy for spastic cerebral palsy: a comparison of outcomes. *Childs Nerv Syst.* 2009 Sep;25(9):1091-6. Epub 2009 May 30
2. Almubarak S, Gan YC, Steinbok P, Henderson G, Poskitt K, Nadel H, Goddard K, Hukin J. Occurrence of basal ganglia germ cell tumors without a mass. *Arch Neurol.* 2009 Jun;66(6):789-92
3. Kulkarni AV, Drake JM, Mallucci CL, Sgouros S, Roth J, Constantini S; Canadian Pediatric Neurosurgery Study Group. Endoscopic third ventriculostomy in the treatment of childhood hydrocephalus. *J Pediatr.* 2009 Aug;155(2):254-9.e1. Epub 2009 May 15 (Dr. Steinbok is a member of the Canadian Pediatric Neurosurgery Study Group)
4. Di Maio S, Gul SM, Cochrane DD, Henderson G, Sargent MA, Steinbok P. Clinical, radiologic and pathologic features and outcome following surgery for cervicomedullary gliomas in children. *Childs Nerv Syst.* 2009 Nov;25(11):1401-10. Epub 2009 Jul 28.
5. Malheiros JA, Trivelato FP, Magaldi Oliveira M, Gusmão S, Cochrane DD, Steinbok P: Endoscopic choroid plexus cauterization versus ventriculoperitoneal shunt for hydranencephaly and near

hydranencephaly: a prospective study. *Neurosurgery* 2009 in press.

6. Aldana PR, Steinbok P. Prioritizing neurosurgical education for pediatricians: results of a survey of pediatric neurosurgeons. *J Neurosurg Pediatr.* 2009 Oct;4(4):309-16.
7. Schrader D, Langill L, Singhal A, Steinbok P, Connolly MB. Cingulate Lesions Presenting With Epileptic Spasms *J Clin Neurophysiol.* 2009 Sep 11. [Epub ahead of print]
- Dr. Cochrane
8. Warren DT, Henderson G, Cochrane DD. Bilateral choroid plexus hyperplasia: a case report and management strategies *Childs Nerv Syst.* 2009 25: 1617 DOI: 10.1007/s00381-009-0923-6.
9. Heran M, Cochrane D, Mann D, Gupta A. Occipital dermoid cyst associated with dermal sinus and cerebellar abscesses. *Can J Neurol Sci.* 2009;36:487-90
10. Riva-Cambrin J, Allan S, Detsky AS, Lamberti-Pasculli M, Sargent MA, Armstrong D, Cochrane DD, Drake JM. Predicting post resection hydrocephalus in pediatric patients with posterior fossa tumors. *J Neurosurg Pediatrics* DOI: 10.3171/2009.1.PEDS08298
11. Cochrane D, Taylor A, Miller G, Hait V, Matsui I, Bharadwaj M, Devine P. Establishing a Provincial Patient Safety and Learning System: Pilot Project Results and Lessons Learned. *Healthcare Quarterly* 2009 (Special issue Patient Safety Papers)
12. Kulkarni AV, Shams I, Cochrane DD, McNeely DP. Quality of life after endoscopic third ventriculostomy and cerebrospinal fluid shunt: an adjusted multivariable analysis in a large cohort Submitted for publication
13. Kulkarni AV, Drake JM, Mallucci CL, Sgouros S, Roth J, Shlomi Constantini S. Endoscopic Third Ventriculostomy in the Treatment of Childhood Hydrocephalus. *J Pediatr* 2009;155:254-9
14. Pakzad-Vaezi K, Cochrane D, Sargent M, Singhal A. Conventional and Diffusion-Weighted Magnetic Resonance Imaging Findings in a Pediatric Patient with a Posterior Fossa Brain Tumor and Papilledema. *Pediatr Neurosurg.* 2009 Dec 24;45(6):414-418

HONOURS AND AWARDS

| Recipient | Name of Award | Date Received |
|--------------------|--|---------------|
| Dr. Doug Cochrane | A D McKenzie Clinical Teaching Award, Department of Surgery, UBC | 2009 |
| Fellows Supervised | Dr. David Anderson – Fellow – Jan 1- Jun 30, 2009 | |
| | Dr. Mansoor Foroughi – Fellow - Jul 1, 2009 – Dec 31, 2009 | |

| | |
|----------------------|---|
| Residents Supervised | Peter Gooderham – Resident – Jan 1, 2009 – Feb 13, 2009 |
| | Jennifer Gelinas – Resident - May 1, 2009 – Jun 30, 2009 |
| | Raymond Yong - Resident – Feb 2009 - Jun 30, 2009 |
| | Ryan Janicki - Resident Aug1, 2009 – Dec 31, 2009 |
| Students | Kaivon Pakzad-Vaezi (medical student) Tara Adirim (medical student) |
| | Daria Krivosheya (Summer student) July 1-August 31, 2009 Project title: Natural History of Pediatric Arachnoid Cysts |
| | |

SUCCESSFUL GRANT FUNDING

| Project Title | PI | Team | Granting Agency | Amount |
|--|------------|------|--|--------------|
| Fellowship in Pediatric Neurosurgery 2010/2011 | P Steinbok | | Fellowship allocation Committee at BC Children's Hospital | \$43,865.61 |
| Thalamic brain tumours in Canada in the MRI era | P Steinbok | | C ¹⁷ Research Network and Childhood Cancer Foundation | \$117,985.00 |
| International Traveling Fellowship Award to support of Dr Tanya Leyva – Mastrepa from Cuba | P Steinbok | | Pediatric Section of the AANS/CNS | \$5,000 |
| Fellowship in Pediatric Neurosurgery 2009/2010 | P Steinbok | | Fellowship allocation Committee at BC Children's Hospital | \$66,700.00 |

COMMITTEE PARTICIPATION

Dr. Steinbok

1. President-elect, International Society for Pediatric Neurosurgery
2. Chair, Education Committee – Pediatric Section AANS
3. International Society for Pediatric Neurosurgery
Member, Executive Committee, President elect
4. Medical Advisory Board member – Best Doctors of Canada

Dr. Cochrane

5. Chair of the British Columbia Patient Safety Quality Council
6. Provincial Patient Safety Officer, British Columbia

7. Chair of the Board, Canadian Patient Safety Institute
8. MFMU Network Advisory Board for MOMS study
9. MOMS Shunt Review Committee 2008
10. International Infant Hydrocephalus Study – Data Monitoring Committee

Dr. Singhal

11. Co-chair; scientific review committee; signing officer for research grant allocation - Rare Diseases Foundation of British Columbia
12. Director, Trauma Service, BC Children's Hospital

THE DEPARTMENT OF PEDIATRIC OPHTHALMOLOGY



Dr. Christopher
Lyons, Department
Head

Academic Highlights

TEAM: 2009-10

Faculty On-site

Dr. Christopher Lyons,
Department Head
Dr. Jane Gardiner
Dr. Maryam Aroichane

Faculty Off-site

Dr. Roy Cline
Dr. Alan Demco
Dr. Ross Kennedy
Dr. Megan Rees
Dr. Aron Tischler
Dr. Patrick Ma (retina)
Dr. Andrew Merkur
Dr. Katherine Paton
(ocular oncology)

Dr. Peter Dolman
(oculoplastics)
Dr. David Rossman (orbit)

Consulting Faculty

Dr. David Albiani (retina)
Dr. Duncan Anderson
(neuro-ophthalmology)
Dr. Simon Lam (retina)

Affiliations - Visual Impairment Program

Dr. Carey Matsuba

Research Department

Dr. Debbie Giaschi

Orthoptic Staff

Ms. Christy Giligson
Ms. Andrea Quan
Ms. Vaishali Metha
Ms. Cindy York
Ms. Hadil Eshtayah

Electrophysiology Staff

Mr. Richard Gonzalez

Administrative Staff

Ms. Courtney Conroy
Ms. Jennifer Ali
Ms. Dolores Latham
Ms. Natalie Wong



HIGHLIGHTS AND ACHIEVEMENTS

The last year has been very busy for the whole department of ophthalmology and as a group we have achieved a lot in terms of patient care, teaching and academic achievements.

In September 2009, we hosted the VIth Biennial International Pediatric Ophthalmology and Strabismus conference in Vancouver, held at UBC Robson Square. Invited guest speakers came from France, the United States, the United Kingdom, Saudi Arabia and Canada to join local faculty for a two-day symposium. Over 100 participants from Europe and North America attended the conference, which for the first time was free to all medical staff from BC. Their feedback after the event attested to the high quality of presentations by both local and visiting faculty.

Clinically, our outpatient clinic was the second busiest in the hospital, with close to 8500 patient visits. We also performed 1200 surgical procedures in the Operating Rooms, the vast majority of which were on a day-case basis. While our priority has always been to deliver the best patient care, faculty both on and off-site participated in teaching Fellows, Residents and Medical Students both in the outpatient setting and in the Operating Room. In the process, trainees undertook research projects in pediatric ophthalmology and childhood as well as adult strabismus, many of which led to presentation and publication.

After several years of staff shortages, the orthoptic clinic is now fully staffed, providing first-class diagnostic services to patients with strabismus and contributing significantly to the care of children with progressive retinal or optic nerve disease through careful visual field testing. The electrophysiology Department is also fully-functional, helping to secure the diagnosis for infants, children and adults with reduced vision from retinal or optic nerve disease. Early diagnosis through retinal Electrophysiology studies is crucial for appropriate counseling of patients and families. These studies can also determine the probability of the disorder affecting future children in an affected family. Our continued

close association with the visual impairment program is particularly welcome in this context. When possible, immediate consultation of an affected family to discuss the implications of the disorder on the day of diagnosis is particularly welcome.

Basic Research at BC Children's ophthalmology headed by Dr. Debbie Giaschi has been targeting the issues of amblyopia and dyslexia. In 2009 Dr. Giaschi was awarded a prestigious CIHR Grant of \$220,000 for her collaborative 3-year research project titled: Predicting occlusion therapy outcomes for children with amblyopia.

Over the year, members of the Ophthalmology Department gave 38 presentations at international meetings and published 27 papers in peer-reviewed literature.

Administratively, Dr. Gardiner replaced Dr. Lyons as Department Head from February to July 2009 while he took a sabbatical at Moorfields and Great Ormond Street Hospitals in London UK, with particular interest in ocular genetics and inherited retinal dystrophies. The world's first human gene transfer for the treatment of Leber's congenital amaurosis at Moorfields and the Institut of Ophthalmology has revolutionized the subject and offered new hope to children affected by retinal dystrophies which have been altogether untreatable until now. This development offers new hope to affected families. Since these exciting techniques will be increasingly available in the future to patients in BC, Dr. Lyons wished to familiarize himself with this important and growing clinical field.

The planned demolition of A-wing which has housed our Department for the last 14 years has introduced an element of uncertainty regarding our future space, facilities and accessibility to the hospital. All Department members have met this challenge with patience and forbearance, and in several ways we hope the care of children can be improved, particularly through optimized scheduling procedures and clinic design.

PRESENTATIONS

Dr. Aroichane

1. "Retinopathy of prematurity." NICU Grand Rounds at Royal Columbian Hospital. May 12, 2009
2. "Leber's Hereditary Optic Neuropathy." Ophthalmology Grand Rounds, Eye Care Centre, March 10, 2009
3. "Neuro-ophthalmology case discussions." Pediatric Ophthalmology, Strabismus International Conference. Vancouver. 2009

Dr. Roy Cline

4. "Hyperopia with Consecutive Exotropia". Vancouver Pediatric Strabismus Symposium. Sept. 2009
5. "Hyperopia with Exotropia". Vancouver Pediatric Ophthalmology & Strabismus Symposium 2009

Dr. Peter Dolman

6. Kuwait Ophthalmic Society, keynote speaker, Kuwait City, February 2009.
7. Orbit Society, presenter, Durham South Carolina, USA, April 2009
8. ASOPRS Spring Symposium, Invited faculty, Laguna Beach, California, July 2009
9. LV Prasad Global Lecture Series, Hyderabad, INDIA, July 2009
10. EUGOGO International Graves Orbitopathy Symposium, Amsterdam, Netherlands, October 28-29, 2009
11. India Oculoplastic Society, Keynote Speaker, Ahmedabad, India, December 3-6, 2009

Dr. Jane Gardiner

12. BCCH, Special Care Nursery (ROP). May 6, 2009
13. UBC Pediatric Refresher Course, Invited Speaker (Slit Lamp Techniques). April 25, 2009
14. "Risk Factors for Retinal Detachment after Laser for ROP". Vancouver Pediatric. Ophthalmology Meeting, September 11, 2009

Dr. Ross Kennedy

15. Pediatric Ophthalmology Conference, Vancouver, September 2009
16. "Vision Screening 2010". Smith-Kettlewell Eye Research Meeting. Captiva Is, FL. April 2010

Dr. Lyons

17. Irish Congress of Ophthalmology Kilkenny May 2009. Invited Guest Lecturer
18. XIIth international Paediatric Ophthalmology Meeting, Dublin Ireland October 2009
19. Invited Guest Lecturer
20. Oman Ophthalmic Society. International Ophthalmic Conference 2010

Dr. Ma

21. Canadian Surgical Retina, Whistler BC February 5-8th, 2009
22. Avastin

23. Juvenile Retinoschisis

Dr. Rossman

24. "Major Orbital Complications of Sinus Surgery." UBC Resident Sinus Dissection Day. Otolaryngology Division – Department of Surgery UBC. Vancouver, Canada. October 9, 2009
25. "Upper and Lower Eyelid Blepharoplasty." British Columbia Association of Optometrists Continuing Education Program. Vancouver, Canada. March 14, 2009.
26. "Eyelid Neoplasms and Periorbital Reconstruction." British Columbia Association of Optometrists Continuing Education Program. Vancouver, Canada. March 14, 2009

Dr. Rossman

27. "Reading, Dyslexia and Vision Therapy." American Academy of Pediatric Ophthalmology. San Francisco, California. April 2009
28. "Vision Therapy Revisited." Pediatric Ophthalmology Conference, Vancouver, BC. September 2009
29. "Reading, Dyslexia and Vision Therapy." American Academy of Pediatric Ophthalmology. Orlando, Florida. April 2010

LECTURES

Dr. Dolman

1. "International Thyroid Eye Disease Society: Its Inception and Structure Orbit Society". University of North Carolina, Durham, USA. April 2009
2. "How To Manage Inflammatory Thyroid Orbitopathy". ASOPRS. Laguna Beach, USA July 2009
3. "Management of Thyroid Eye Disease." AAO. San Francisco, USA. October, 2009
4. "The ITEDS VISA Classification System for Thyroid Orbitopathy." EUGOGO. Amsterdam, Netherlands. November 2009.
5. "Evaluation and Management of Thyroid Orbitopathy." 1st All-India Oculoplastics Society Symposium. Ahmedabad, India. December 2009.
6. Current Concepts in Thyroid Eye Disease,
7. Porous Orbital Implants and Complications
8. Approaches to Lacrimal Surgery
9. Orbital Vascular Malformations
10. Lacrimal Gland Pleomorphic Adenomas and their management
11. Vibration anesthesia in orbit and eyelid surgery
12. Lacrimal Surgery: newest Techniques
13. Eyelid Ptosis and its Management
14. Vascular Lesions of the Orbit
15. Porous Implants and their Complications
16. Endonasal DCR Techniques
17. Orbital Foreign Bodies
18. Orbital Trauma and its Management

Dr. Deborah Giaschi

19. "A new look at amblyopia treatment." Ophthalmology Grand Rounds. November 2009

Dr. Lyons

20. "Controversies in Pediatric Ophthalmology: The management of cataract in infancy." Irish Congress of Ophthalmology. Kilkenny. May 2009
21. "Medical retina and the child." VaInternational Pediatric Ophthalmology and Strabismus Meeting. Vancouver 2009
22. "Retinal Dystrophies in Childhood." XIIth International Pediatric Ophthalmology Meeting. Dublin, Ireland. October 2009
23. "Traumatic Superior Oblique Palsy. Diagnosis and management." Oman Ophthalmic Society. March 2010
24. "Vascular orbital Disorders of Childhood." Oman Ophthalmic Society. March 2010
25. "Childhood Retinal Dystrophies." Oman Ophthalmic Society. March 2010
26. "Panel Discussion on 'Problems in Pediatric Ophthalmology.'" Oman Ophthalmic Society. March 2010

Dr. Patrick Ma

27. "Vitreoretinal Diseases, Pediatric Retinal Diseases." Visiting Lecturer ORBIS International. China. July 13-19, 2009

Dr. David Rossman

28. "Eyelid Trauma." Oculoplastics Resident Teaching. Department of Ophthalmology and Visual Sciences, UBC. Vancouver, Canada. November 13, 2009.
29. "Anatomy of Orbits and Lids." Oculoplastics Resident Teaching. Department of Ophthalmology and Visual Sciences, UBC. Vancouver, Canada. September 4, 2009.
30. "Blepharoplasty." Oculoplastics Resident Teaching, Department of Ophthalmology and Visual Sciences, UBC. Vancouver, Canada. March 17, 2009.

FORMAL TEACHING

Dr. Gardiner

1. "December 2009, Clinical Skills Teaching for 2nd year Medical Students

Dr. Giaschi

2. Psychology 367 (Sensory Systems): 39 hrs, 186
3. Psychology 368 (Perceptual Processes): 39 hrs, 90 students (in progress)
4. PBL INT/BB1: 35 hrs, 8 students

Dr. Ma

5. Seminar for Optometrists, "Therapeutics in the 21st Century", April 11, 2010

Dr. Rossman

6. Ophthalmology Clinical Skills Part I and II. Third year medical students and UBC Medical School, Vancouver, Canada. Nov 2009 (3 hours)
7. Ophthalmology Resident Wet Lab Teaching. Basic Oculoplastic Techniques. UBC Department of Ophthalmology, Vancouver, Canada. Nov 12, 2009 (1 hour)

Dr. Rees

8. INDE 420 Clinical Skills Ophthalmology Clinical Skills Block, 2010 – 2011 (4 hours)

PUBLICATIONS APR 1, 2009 TO MAR 31, 2010

Dr. Aroichane

1. Puvanachandra N, Aroichane M J. Diffuse corneoscleral limbal euromas with prominent corneal nerves in multiple endocrine neoplasia syndrome type IIB. *Ped. Ophth and Strab* 2009, Jun 25:1-3

Dr. Dolman

2. Fayers T, Morris DS, Dolman PJ. Vibration-assisted anesthesia in eyelid surgery. *Ophthalmology* 2010, Mar 18
3. Dolman PJ. Evisceration, enucleation and alternatives to globe removal. *Can J Ophthalmol* 2010. Feb 45(1) 9-10
4. Morris DS, Fayers T, Dolman PJ. Orbital teratoma: case report and

management review. *JAAPOS*. 2009 Dec; 13(6): 605-7

5. Dolman PJ. Reply re: Amaurosis as a complication of non-endoscopic endonasal dacryocystorhinostomy. *Ophthal Plast Reconstr Surg*. 2009 Sep-Oct;25(5):415-6
6. Madge SN, Malhotra R, Desousa J, McNab A, O'Donnell B, Dolman P, Selva D.
7. Lacrimal Bypass Tube for Lacrimal Pump Failure Attributable to Facial Palsy. *Am J Ophthalmol*. 2009 Nov 5
8. Douglas RS, Cahill K, Dolman PJ et al. Development of criteria for evaluating clinical response in thyroid eye disease using a modified Delphi technique. *Arch Ophthalmol* 2009; 127(9): 1155-60
9. Wiwatwongwana D, Berean KW, Dolman PJ, Rootman J, White VA. Unusual carcinomas of the lacrimal gland: epithelial-myoeepithelial carcinoma and myoeepithelial carcinoma. *Arch Ophthalmol*. 2009 Aug;127(8):1054-6
10. Bleyen I, Dolman PJ. The wies procedure for management of trichiasis or cicatricial entropion of the upper or lower lid. *Br J Ophthalmol*. 2009 Dec;93(12):1612-5. Epub 2009 Jul 1
11. Chuo JY, Dolman PJ, Ng TL, Buffam FV, White VA. Clinical and histopathologic review of 18 explanted porous polyethylene implants. *Ophthalmology*. 2009 Feb;116(2):349-54

Dr. Gardiner

12. Wiwatwongwana A, Kersey JP, Gardiner JA. The effect of changing oxygen saturation protocols on the incidence of laser for retinopathy of prematurity. *Canadian J Ophthalmol*

Dr. Giaschi

13. Partanen M, Edgell D, Bjornson B, Giaschi D. Cortical systems utilized for reading and temporal processing in developmental dyslexia. *Cognitive Neuroscience Conference*. 2010. (in press)
14. Secen J, Culham J, Giaschi D. The cortical basis of attentive tracking deficits in amblyopia: An fMRI study. Program No. 558.2. *Neuroscience Meeting Planner*. Chicago, IL: Society for Neuroscience, 2009. Online
15. Partanen M, Edgell D, Bjornson B, Giaschi D. Overlapping cortical systems for reading and temporal processing. *Canadian Journal of Experimental Psychology* 63(4):339-49. 2009
16. Giaschi D, Cheema R, Ho C, Vanderbyl B, Kim D, Yau A, Secen J.

The effect of speed on the typical and atypical development of motion-defined form perception. *Journal of Vision* 9(8):648a. 2009

17. Scheel M, Lanyon L, Giaschi D, Barton J. The organization of inter-hemispheric projections from areas 17 and 18 in the human splenium, studied with DTI probabilistic fiber tracking. *Journal of Vision* 9(8):772a. 2009
18. Ho C, Giaschi D. Low- and high-level motion perception deficits in anisometropic and strabismic amblyopia: evidence from fMRI. *Vision Research* 49: 2891-901. 2009
19. Lanyon L, Giaschi D, Au Young S, Fitzpatrick K, Diao L, Bjornson B, Barton J Combined functional MRI & diffusion tensor imaging analysis of visual motion pathways. *Journal of Neuro-Ophthalmology* 29:96-103. 2009
20. Ho C, Giaschi D. Low- and high-level first-order random-dot kinematograms: evidence from fMRI. *Vision Research* 49:1814-24. 2009

Dr. Lyons

21. Neffendorf J, Quinlan M, Mulholland C, Lyons CJ. Disc drusen complicated by asymptomatic hemorrhage in childhood. *Can J Ophthalmol* 45(5) 2010
22. Armstrong L, Smith M, Heran M, Connolly M, Lyons CJ, Friedman J. Cerebrovasculopathy in NF1 associated with scalp and ocular defects. *J Med Genetics*. Submitted
23. Puvanachandra N, Lyons CJ. Rapid measurement of corneal diameter in children: validation of a clinic-based digital photographic technique. *JAAPOS* 13(3);287-8:2009
24. Witwatwongwana A, Connolly M, Lyons CJ. Red reflex mimicking lens subluxation in a child undergoing orthokeratology. *Eye (Lond)*. 2010 Jan; 24(1):182. Epub 2009 Mar 20
25. Mavrikakis J, Pegado V, Lyons CJ, Rootman J. Congenital orbital fibrosis: a distinct clinical entity. *Orbit* 2009; 28(1) 43-9
26. Wiwatwongwana A, Lyons CJ. Cranial Nerves and Ocular motility (Chapter 1). *Pediatric Neurology* Ed. O Dulac, Elsevier 2010
27. Lyons CJ, Wiwatwongwana A: Optic nerve and visual Pathways (Chapter 2). *Pediatric Neurology* Ed. O Dulac, Elsevier 2010
28. Puvanachandra N, Goddard K, Lyons CJ. Dramatic visual recovery after prompt radiotherapy and chemotherapy for leukaemic infiltration

of the optic nerve in a child. *Eye* 24, 927-928 (May 2010)

29. Comer R, Kim P, Cline RA, Lyons CJ. Cataract extraction in infancy: Outcomes and aphakic glaucoma. *Eye* (submitted)
30. Mulholland C, Rootman J, Lyons CJ. Primary iris neovascularization in NF1. *Journal of Neuro-Ophthalmology*. Accepted December 2009
31. Brennan R, Lyons CJ. Melatonin and ocular physiology (Chapter 8). *The Pineal Gland and Melatonin: Recent Advances in Development, Imaging, Disease and Treatment*. edited by Turgut M and Kumar R. Nova Publishers 2009
32. Lyons CJ, Rootman J. Strabismus in thyroid-related orbitopathy. *Pediatric Endocrinology Reviews*. accepted January 2010
33. Kim P, Lyons CJ. Dating the onset of infantile cataract from family photographs. *Archives of Diseases in Childhood*. Accepted March 2010

Dr. Ma

34. Cui J, Maberley D, Samad A, Ma P, Ning A, Matsubara JA, Baciou P. Expression of integrins on human choroidal neovascular membranes. *Human Press*, 2009 2-12-19

Dr. Rossman

35. Wong JCT, Rossman D, Bressler B. Lacrimal gland inflammation, an extra- intestinal manifestation of inflammatory bowel disease. *Inflammatory Bowel Diseases*. In Press
36. Rossman D, Michel R, Codere F. A case of an enlarged medial rectus muscle. *International Journal of Ophthalmology*. 20:4:319-21, 2009

SUCCESSFUL GRANT FUNDING

| Project Title | PI | Team | Granting Agency | Amount |
|--|---------------------|--|-----------------|-----------|
| Predicting occlusion therapy outcomes for children with amblyopia | Giaschi, Deborah | Regan, David (York U) Lyons, C, Gardiner, J Cline, R, Aroichane, M | CIHR | \$220,269 |
| The role of coarse stereopsis in typical and atypical visual development | Giaschi, Deborah | Wilcox, Laurie (York U), Lyons, C, Gardiner, J | CIHR | \$88,693 |
| Lucentis vs. laser for DME | P. Ma & D. Maberley | Retina | Novartis | \$30,000 |



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|--------------------|--|
| Fellows Supervised | Dr. Roy Cline Dr. Salma Rai, Nepal, Surgical Teaching |
| | Dr. Peter Dolman Tessa Fayers, England, Fellow Dan Morris, England, Fellow JoAnne Pon, New Zealand, Fellow |
| | Dr. Jane Gardiner Conor Mulholland, Apr-June 2009 Maryam Isaac, Apr-June 2009 Salma Rai, May 2009-Apr 2010 Peter Kim, July 2009-June 2010 |
| | Dr. Christopher Lyons Atchareeya Jengjalernntchareeya Jengjalern, May 2008 – May 2009, Thailand Conor Mulholland, July 2008 – June 2009, Northern Ireland Salma Rai, May 2009 – present, Nepal Peter Kim, July 2009 – present, Australia |
| | Dr. Patrick Ma C. Baker, Canada, Retina fellow T. Dien, Canada, Retina fellow A. Gueram, USA, Retina fellow A. Kirker, Canada, Retina fellow |

Residents
Supervised

| |
|---|
| Dr. David Rossman Dr. Corey Ramstead – July 1, 2009 – March 31, 2010. Canada Dr Shane Seal – Jan 1, 2010 – Feb 28, 2010. Canada |
| Dr. Maryam Aroichane Natashka Pollock, third year resident, ophthalmology, clinical: All in the family, a pedigree analysis of physiologic anisocoria |
| Dr. Roy Cline Monday clinics weekly (Chuo, Yeung, Yearsley, Sheldon, Talbot, C. Pollock, Seth, Bhui, N. Pollock) Wednesday or Thursday clinics weekly (Chuo, Yeung, Yearsley, Sheldon, Talbot, N. Pollock, C. Pollock, Seth, Bhui) Elective (May) N. Pollock |
| Dr. Peter Dolman All 8 ophthalmology residents rotate through oculoplastics and orbit rotations |
| Dr. Jane Gardiner All 8 ophthalmology residents rotate through pediatric rotations |
| Dr. Christopher Lyons All 8 ophthalmology residents rotate through pediatric rotations: Steven Schendel, Dennis Bhui, Adi Seth, Chris Pollock, Natashka Pollock, Claire Sheldon, Renee Talbot, & George Yearsley |
| Dr. Patrick Ma N. Pollock, L. Mok, D. Bhui, S. Schendel, C. Sheldon, S. Levasseur (Clinical & Research retina rotation) A. McLaughlin - elective |
| Dr. Megan Rees Natashka Pollock, R3, Ophthalmology (clinical) Claire Sheldon, R3, Ophthalmology (clinical) Renee Talbot, R4, Ophthalmology (clinical) C Pollock, R4, Ophthalmology (clinical) |
| Dr. David Rossman Dr. Rene Talbot, Dr. George Yearsely, Dr. Adi Seth, Dr Steve Schendel, Dr. Steve Levasseur – all UBC ophthalmology residents who rotate with me for 3 months for orbital and oculoplastic surgery training |

| | |
|----------|--|
| Students | Dr. Peter Dolman 45 Medical Students (3rd year), 2 half days per week |
| | Dr. Jane Gardiner A 3rd year medical student rotates through my clinic for ½ day each week |
| | Dr. Deborah Giaschi Marita Partanen – MSc requirements completed March 2010 John Secen – 3rd year MSc student Jake Hayward – NSERC USRA summer student Emily Harrison – UBC Faculty of Medicine summer student Grace Truong – UBC Quinn summer student Tom Tang – work-study student Rawn Stokoe – work-study student |
| | Dr. Ross Kennedy 2 Family Medicine elective students Ophthalmology residents on rotationStudents 2nd year group 1-4th year elective student |
| | Dr. Christopher Lyons A 3rd year medical student rotates through my clinic for a half day each week |
| | Dr. Patrick Ma 6 medical students (2nd & 3rd year) 2 4th year electives and 1 summer research student |
| | Dr. Megan Rees Tracey Lee, med yr 4, Ophthalmology Selective Supervised medical students in my office Tuesday mornings all year. |

COMMITTEE PARTICIPATION

Dr. Dolman

1. 2009 – present Division Head of Oculoplastics, Dept of Ophthalmology, UBC
2. 2001-2009 Director of Fellowship Programs, Dept of Ophthalmology
3. 2006 – present Faculty of Medicine Clinical Promotions Appeal Committee
4. 2002-2009 ECC OR Operating Room Advisory Committee

5. 2001-2009 Departmental Clinical Faculty Promotions Committee
Dr. Gardner

6. 2008-present Canadian Association of Pediatric Ophthalmology and Strabismus, Secretary /Treasurer
7. 2009-present Canadian Orthoptic Council, Admissions and training committee,
8. 2007-present Royal College Examiner for Ophthalmology
9. 2008-present UBC Ophthalmology and Vision Science Continuing Education Committee
10. 2010 – present Ophthalmology representative on the Undergraduate Medical Education Committee, UBC Faculty of Medicine
11. 2006 - present Medical Director, BCCH Orthoptics Training Program
12. Feb-July 2009 Acting Head, BCCH Dept of Ophthalmology

Dr. Giaschi

13. Chair, Research Day, Department of Ophthalmology and Visual Sciences
14. Faculty coordinator, NSERC Undergraduate Student Research Award coordinator, Medicine
15. Member, High Field MRI Centre Protocol Review committee
16. Member, ECC Advisory committee, Department of Ophthalmology and Visual Sciences
17. Member, Teaching Evaluation committee, Dept of Psychology

Thesis supervisory committees:

18. Samantha Palmer (Neuroscience PhD, completed)
 19. Adrienne Borrie (Medical Genetics MSc, completed)
 20. Lee Lau (Neuroscience MSc)
 21. Marla Mickleborough (Neuroscience PhD)
 22. Georgia Tropini (Neuroscience MSc)
 23. Nadia Pietravallo (Neuroscience MSc)
- Dr. Ross Kennedy

24. 2007 – present, BC Government Vision Screening Steering Committee, Member

25. 2008 - present , American Association for Pediatric Ophthalmology and Strabismus Vision Screening Committee, Member

Dr. Lyons

26. Director, Ophthalmology Residency Training, UBC
27. Head, Department of Ophthalmology, BC Children's Hospital
28. Member Residency Selection sub-committee
29. Member, UBC Ophthalmology Staff Committee
30. Member, UBC Advisory Committee
31. Member, UBC Ophthalmology Manpower Committee
32. Member, Surgical Specialties Cabinet Committee, BC Children's Hospital
33. Member, Surgical Specialties Advisory Committee, BC Children's Hospital
34. Member, Ophthalmology Staff Committee, Vancouver General Hospital
35. Member, Medical Staff Committee, Vancouver General Hospital
36. Member of the Written Exam Committee and Oral Exam Committee, RCPSC (Ophthalmology)

Journal Reviewer:

37. British Journal of Ophthalmology
38. Canadian Journal of Ophthalmology Eye
39. Journal of the Association for Pediatric Ophthalmology & Strabismus

PROJECTS AND INITIATIVES IN PROGRESS

Dr. Roy Cline: Long term follow up of hyperopia with exotropia both consecutive & primary.

Dr. Ross Kennedy: Deployment of vision screening technology.

Dr. Christopher Lyons: Outreach ophthalmology services to remote and under-served communities of British Columbia: Bella Coola October 2009. Nelson (clinic + surgery) August 2009

DEPARTMENT OF PEDIATRIC ORTHOPAEDIC SURGERY



Dr. Christopher W.
Reilly, Department
Head

Academic Highlights

TEAM: 2009-10

Faculty:

Dr. Christopher W. Reilly, Department Head
Dr. Richard D. Beauchamp
Dr. Kenneth L.B. Brown
Dr. Christine M. Alvarez
Dr. U.K. Kishore Mulpuri
Dr. Firoz Miyanji
Dr. Shafique P. Pirani

Other Staff Members

Ms. Bronwyn Slobogean, Research Manager
Mr. Quinn Hamilton, Research Assistant
Mr. Harpreet Chhina, Research Assistant
Ms. Brenda Whitworth, Administrative Secretary
Ms. Ram Johal, MOA to Dr. C. Reilly
Ms. Judy Woodward, MOA to Dr. R. Beauchamp
Ms. Navjeet Khunguray, MOA to Dr. K. Brown
Ms. Marilyn Timbrell, MOA to Dr. C. Alvarez
Ms. Rajni Sharma, MOA to Dr. K. Mulpuri
Ms. Nalini Raghu, MOA to Dr. F. Miyanji
Ms. Anna Stonehouse, MOA to Dr. S. Pirani
Ms. Cory Savitzky, RN, Nurse Clinician, Orthopaedic Clinic
Mr. Fidel Brooks, Cast Tech, Orthopaedic Clinic
Mr. Ricardo Botia, Cast Tech, Orthopaedic Clinic
Ms. Shelina Kabani, Orthopaedic Clinic
Ms. Bel Grewal, Orthopaedic Clinic
Ms. Kyla Oughton, Orthopaedic Clinic

HIGHLIGHTS AND ACHIEVEMENTS

Dr. Beauchamp

- Special Recognition for 25 years service from The Centre for Child Development, Surrey, BC, May 3, 2009

Dr. Pirani

- 2009 Faculty of Medicine Significant Impact of Teaching in the Local Community, The University of British Columbia, April 2009
- Above and Beyond Award (in the category of Service Delivery Excellence), Awarded by the Fraser Health Authority, 2009



PRESENTATIONS

Dr. Reilly

1. “Minimizing Tourniquet Pressure in Pediatric Anterior Cruciate Ligament Reconstructive Surgery: A Blinded, Prospective Randomized Controlled Trial.” Journal of Pediatric Orthopaedics Research Day, Orthopaedic Update, Vancouver, BC, April 21-23, 2009
2. “Apical Vertebra Pedicle Morphology in Scoliosis”. Research Day, Orthopaedic Update, Vancouver, BC, April 21-23, 2009
3. “Management of 55 Degree Idiopathic Scoliotic Deformities”. Pediatric Orthopaedic Society of North America Annual Meeting, Boston, USA, April 29, 2009
4. “C1 Lateral Mass Screw Fixation in Children: Indications, Outcomes and Technique in 11 Consecutive patients”. Spine Society of Australia Annual Meeting. Brisbane, Australia. April 17-19, 2009
5. “Apical Vertebra Pedicle Morphology in Scoliosis”. Spine Society of Australia Annual Meeting. Brisbane, Australia. April 17-19, 2009
6. “Minimizing Tourniquet Pressure in Paediatric Anterior Cruciate Ligament Reconstructive Surgery: A Blinded, Prospective Randomized Controlled Trial”. Canadian Orthopaedic Association Annual Meeting, Whistler BC, July 3-6, 2009
7. “Psychiatric Disorders Associated with Scoliosis: A Prevalence Study”. Canadian Orthopaedic Association Annual Meeting, Whistler BC, July 3-6, 2009
8. “Apical Vertebra Pedicle Morphology in Scoliosis”. Canadian Orthopaedic Association Annual Meeting, Whistler BC, July 3-6, 2009
9. “Thoracolumbar Injuries in Children”, Sixth Annual Fall Spine Symposium, University of Texas, Dallas Texas, October 16, 2009
10. “Association of Psychiatric Disorder with Scoliosis: A Prevalence Study”. Canadian Academy of Child and Adolescent Psychiatry Meeting, Toronto ON, November 12-14, 2009

Dr. Beauchamp

11. “The Biomechanics of Running and How Injuries Occur”, Running Room Get-Fit Weekend, Jasper AB, April 24-26, 2009

Dr. Brown

12. “A Study of Combined Surgery and Radiation Therapy for Localized Ewing’s Sarcoma” – A proposal from the Orthopaedic surgeon’s Subcommittee, Children’s Oncology Group, Dallas TX, September 2009

Dr. Mulpuri

13. “Quantifying Risk: The Quality of Logistic Regression Models in Orthopaedic Research with Recommendations for Standards of Reporting (Poster)”. American Academy of Orthopaedic Surgeons Annual Meeting, Las Vegas Nevada, February 25-March 1, 2009
14. “The Impact of Surgical Waitlist Times on Scoliosis Surgery: The surgeon’s perspective”. Canadian Spine Society Annual Meeting, Banff, Alberta. March 13-14, 2010
15. “Do Non-Steroidal Anti-inflammatory Drugs Inhibit Bone Healing? A Meta-analysis of Cohort and Case Control Studies”. Canadian Spine Society Annual Meeting, Banff, Alberta. March 13-14, 2010
16. “Graft Tensioning in Anterior Cruciate Ligament Reconstruction: A Systematic Review of Randomized Controlled Trials”. International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine Biennial Congress. Osaka, Japan. April 5-9, 2009
17. “Reproducibility of Herring’s Classification Using Two Different Techniques and its alteration during the Evolution of the Disease”. Canadian Orthopaedic Association Annual Meeting, Whistler, British Columbia. July 3-6, 2009
18. “Methodological Considerations Related to High Resolution pQCT Imaging of the Distal Radius in Children and Adolescents”. American Society of Bone Mineral Research Conference (Poster). September 10-15, 2009

Dr. Pirani

19. “Toward Effective Ponseti Clubfoot Care: The Uganda Sustainable Clubfoot Care Project”, “The Mechanism of Clubfoot Tarsal Anlagen Deformity Correction during Ponseti Treatment”, Pediatric Society of North America Annual Meeting, Boston USA. April 29-May 2, 2009
20. “Achilles Tenotomy in Clubfoot Treatment”, “MRI of the Clubfoot

Treated by the Ponseti Method”, “What have we learned? Key points in applying Ponseti casts”, “Treatment of Recurrences”, “The Uganda Sustainable Clubfoot Care Project”, “Atypical Clubfoot Symptoms and Methods of Treatment”, Third International Conference – Treatment of Congenital Foot Deformities in Children. Yaroslavl, Russia. May 8-9, 2009

21. “Toward Effective Ponseti Clubfoot Care: The Uganda Sustainable Clubfoot Care Project”. Mercer Rang Visiting Professorship Salter Society Meeting. Toronto ON. May 29, 2009
22. “Next Steps for the COA”, 64th Canadian Orthopaedic Association Annual Meeting, Whistler BC. July 4, 2009
23. “MRI Evaluation of Clubfoot Correction by the Ponseti Method”, “A Reliable and Valid Method Assessing the Amount of Deformity in a Clubfoot”, “Towards Effective Clubfoot Care – The Uganda Sustainable Clubfoot Care Project”, 18th Orthopaedic Summer School, 1st Nordic Ponseti Clubfoot Course. ORTON Orthopaedic Hospital. Helsinki, Finland. July 30-31, 2009
24. “Can It work? Will it Work? Is It worth It?”. Gaillie Lecture. Canadian Surgery Forum. Victoria Conference Centre. Victoria BC, September 11, 2009
25. “MRI Evaluation of Clubfoot”, “The Ugandan Project”, British Orthopaedic Association Annual Congress with the participation of the Specialist Societies. Manchester UK. September 15-18, 2009
26. “Public Health Principles incorporated within design of USCCP”, “Building capacity to treat and to teach how to treat congenital clubfoot with the Ponseti Method”, “Investigations proposed and performed by USCCP”. 11 International Clubfoot Symposium, Bone and Joint Decade Global Network Conference. Washington DC. October 24, 2009
27. “The Uganda Sustainable Clubfoot Care Project – Treating and Teaching How to Treat Clubfeet in Uganda”. Global health Speaker Series, presented by UBC Centre for International Health, University of British Columbia, Vancouver BC, November 19, 2009
28. “Ponseti Clubfoot Method and Minimally Invasive Approach to Vertical Talus: Technical Skills Course”. American Academy of Orthopaedic Surgeons Annual Meeting. New Orleans, Louisiana. March 9-13, 2010

LECTURES

Dr. Reilly

1. “Post-op pain in Scoliosis CMI Vs PCA”, Department of Orthopaedics Visiting Professor: Dr. Benjamin, Vancouver BC, October 23, 2009

Dr. Beauchamp

2. “Science Behind Botulinum toxin”, Orthopaedic Update, Department of Orthopaedics, Vancouver BC, April 22, 2009
3. “Mid-Foot Break: New Perspectives”, Department of Orthopaedics Visiting Professor: Dr. Benjamin Joseph, BC Children’s Hospital, Vancouver BC, October 23, 2009
4. “Botox Media Training Session”, Allergan Inc., The Fairmont Vancouver Airport Hotel, Richmond, British Columbia. February 17, 2010

Dr. Alvarez

5. “The Influence of Gender on the Anatomic Burden of Hereditary Multiple Exostoses”, Orthopaedic Update, Department of Orthopaedics, April 21, 2009
6. “Botulinum A Toxin in Care of Contracted and Deformed Joints, Part 1-Biologics April 2009”, Orthopaedic Update, Department of Orthopaedics, April 21, 2009 (Dr. Beauchamp presented on behalf of Dr. Alvarez)
7. “Two-year Botox and Clubfoot Outcomes”, Department of Orthopaedics Visiting Professor: Dr. Benjamin Joseph, Vancouver BC, October 23, 2009

Dr. Mulpuri

8. “Paediatric Knee Injury Workshop”, Paediatric Emergency Medicine Update, Vancouver British Columbia, April 25, 2009
9. “Hip Surveillance in Cerebral Palsy British Columbia”, CP Association of British Columbia Annual General Meeting, Vancouver British Columbia, September 2009
10. “Paediatric Orthopaedic Research Overview”, Department of Orthopaedics Visiting Professor: Dr. Benjamin Joseph, Vancouver BC, October 23, 2009

11. "Hip Surveillance in Cerebral Palsy British Columbia", South Surrey Development Centre, Surrey British Columbia, March 18, 2010.
12. "DDH Before Walking Age: The place of imaging and treatment options", Saint Justine Orthopaedic Review Course, Montreal Quebec, March 24-26, 2010
13. "Highlights in Hip Fractures and Dislocations", Saint Justine Orthopaedic Review Course, Montreal Quebec. March 24-26, 2010
14. "How to Manage Intra-articular Knee Injuries and Osteochondral Knee Injuries", Saint Justine Orthopaedic Review Course. Montreal Quebec. March 24-26, 2010

Dr. Pirani

15. "Recent Advances in clubfoot Treatment, including the role played by the Royal Columbian Hospital". Surgical Grand Rounds. Royal Columbian Hospital. January 22, 2009

FORMAL TEACHING

Dr. Reilly

1. "Bone and Soft Tissue Tumors", BCCH Resident Teaching Rounds, Vancouver British Columbia, April 9, 2009 – 1 hour
2. "Slipped Capital Femoral Epiphysis", BCCH Resident Teaching Rounds, Vancouver British Columbia, July 30, 2009 – 1 hour
3. "The Skeletal Dysplasias", BCCH Resident Teaching Rounds, Vancouver British Columbia, October 29, 2009 – 1 hour
4. "Pediatric Spine Deformity (excluding scoliosis)", Department of Orthopaedics Resident Seminar, November 19, 2009 – 1.5 hours
5. "Slipped Capital Femoral Epiphysis", Department of Orthopaedics Resident Lecture, November 19, 2009 – 1.5 hours
6. "Idiopathic Scoliosis", BCCH Resident Teaching Rounds, Vancouver British Columbia, January 14, 2010 – 1 hour
7. "The Lower Extremity", BCCH Resident Teaching Rounds, Vancouver British Columbia, March 18, 2010 – 1 hour

Dr. Beauchamp

8. "Congenital Scoliosis", BCCH Resident Teaching Rounds, Vancouver British Columbia, June 2, 2009 – 1 hour

9. "The Lower Extremity", BCCH Resident Teaching Rounds, Vancouver British Columbia, August 4, 2009 – 1 hour
10. "The Pediatric Orthopaedic Examination", BCCH Resident Teaching Rounds, Vancouver British Columbia, October 13, 2009 – 1 hour
11. UBC Clinical Skills Tutorial, INDE 420 Musculoskeletal, Vancouver British Columbia, October 4 & 21, 2009 – 8 hours
12. "Leg Length Discrepancy", BCCH Resident Teaching Rounds, Vancouver British Columbia, December 8, 2009 – 1 hour
13. "The Child with a Limb Deficiency", BCCH Resident Teaching Rounds, Vancouver British Columbia, February 23, 2010 – 1 hour
14. "Botox, its role in children and use at BCCH", Doc Talks – 3R Nurses, Vancouver British Columbia, February 24, 2010 – ½ hour
15. "Management of Fractures", BCCH Resident Teaching Rounds, Vancouver British Columbia, March 25, 2010 – 1 hour

Dr. Brown

16. "The Pediatric Orthopaedic Examination", BCCH Resident Teaching Rounds, Vancouver British Columbia, April 16, 2009 – 1 hour
17. "The Upper Limb", BCCH Resident Teaching Rounds, Vancouver British Columbia, May 28, 2009 – 1 hour
18. "Management of Fractures", BCCH Resident Teaching Rounds, Vancouver British Columbia, July 16, 2009 – 1 hour
19. "Bone and Soft Tissue Tumors", BCCH Resident Teaching Rounds, Vancouver British Columbia, September 10, 2009 – 1 hour
20. UBC Clinical Skills Tutorial, INDE 420 Musculoskeletal, Vancouver British Columbia, October 28, 2009 – 4 hours
21. "The Role of the Orthopaedic Surgeon in Diagnosing Child Abuse", BCCH Resident Teaching Rounds, Vancouver British Columbia, December 17, 2009 – 1 hour
22. "Ilizarov Treatment", Doc Talks – 3R Nurses, BCCH, Vancouver British Columbia, March 10, 2010 – ½ hour
23. "Slipped Capital Femoral Epiphysis", BCCH Resident Teaching Rounds, Vancouver British Columbia, March 11, 2010 – 1 hour

Dr. Alvarez

24. "The Child with a Limb Deficiency", BCCH Resident Teaching Rounds, Vancouver British Columbia, June 18, 2009 – 1 hour

25. "The Pediatric Orthopaedic Examination", BCCH Resident Teaching Rounds, Vancouver British Columbia, August 20, 2009 – 1 hour
26. "The Upper Limb", BCCH Resident Teaching Rounds, Vancouver British Columbia, September 24, 2009 – 1 hour
27. UBC Clinical Skills Tutorial, INDE 420 Musculoskeletal, Vancouver British Columbia, October 30, 2009 – 4 hours
28. "Slipped Capital Femoral Epiphysis", BCCH Resident Teaching Rounds, Vancouver British Columbia, November 26 2009 – 1 hour
29. "Congenital Scoliosis", BCCH Resident Teaching Rounds, Vancouver British Columbia, February 11, 2010 – 1 hour
30. "Clubfoot Management", Doc Talks – 3 R Nurses, BCCH, Vancouver British Columbia, March 24, 2010 – ½ hour

Dr. Mulpuri

31. "The Role of the Orthopaedic Surgeon in Diagnosing Child Abuse", BCCH Resident Teaching Rounds, Vancouver British Columbia, April 23, 2009 – 1 hour
32. "Surgical Clinical Investigator: Fact or Fiction", Methodology Research Rounds, BCCH, Vancouver British Columbia, May 12, 2009 – 1 hour
33. "Bone and Soft Tissue Tumors", BCCH Resident Teaching Rounds, Vancouver British Columbia, June 25, 2009 – 1 hour
34. "Leg Length Discrepancy", BCCH Resident Teaching Rounds, Vancouver British Columbia, August 13, 2009 – 1 hour
35. "The Child with a Limb Deficiency", BCCH Resident Teaching Rounds, Vancouver British Columbia, October 1, 2009 – 1 hour
36. UBC Clinical Skills Tutorial, INDE 420 Musculoskeletal, Vancouver British Columbia, October 7 & 9, 2009 – 8 hours
37. "Common Paediatric Orthopaedic Conditions", CME on the Run, Vancouver British Columbia, November 2009 – 1 hour
38. "Management of Fractures", BCCH Resident Teaching Rounds, Vancouver British Columbia, December 3, 2009 – 1 hour
39. "The Upper Limb", BCCH Resident Teaching Rounds, Vancouver British Columbia, February 18, 2010 – 1hour

Dr. Miyanji

40. "Management of Fractures", BCCH Resident Teaching Rounds, Vancouver British Columbia, June 11, 2009 – 1 hour

41. "The Skeletal Dysplasia", BCCH Resident Teaching Rounds, Vancouver British Columbia, July 23, 2009 – 1hour
42. "Congenital Scoliosis", BCCH Resident Teaching Rounds, Vancouver British Columbia, September 17, 2009 – 1 hour
43. "The Lower Extremity", BCCH Resident Teaching Rounds, Vancouver British Columbia, November 19, 2009 – 1 hour
44. "Bone and Soft Tissue Tumors", BCCH Resident Teaching Rounds, Vancouver British Columbia, February 4, 2010 – 1hour
45. "Scoliosis Correction", Doc Talks – 3R Nurses, BCCH, Vancouver British Columbia, March 17, 2010 – ½ hour

Dr. Pirani

46. "The Foot", BCCH Resident Teaching Rounds, Vancouver British Columbia, May 28, 2009 – 1 hour
47. "The Foot", BCCH Resident Teaching Rounds, Vancouver, British Columbia, January 26, 2010 – 1hour

PUBLICATIONS APR 1, 2009 TO MAR 31, 2010

1. **Reilly CW**, McEwan JA, Leveille L, Perdios A, **Mulpuri KM**. "Minimizing Tourniquet Pressure in Pediatric Anterior Cruciate Ligament Reconstructive Surgery: A Blinded, Prospective Randomized Controlled Trial". J Pediatr Orthop., 2009 Apr-May; 29(3):275-80
2. Furey MJ, Arneja S, **Alvarez C**, **Reilly CW**. "Segond Fractures – Not Necessarily Pathognomonic of ACL Injury in the Pediatric Population". Clinical Journal of Sports Medicine, (In Press 2009)
3. Dodwell E, **Reilly CW**, Fisher C, **Mulpuri K**. "A Quality Assessment of Randomized Controlled Trials in the Spine Literature". Spine, (In Press, 2009)
4. Furey MJ, Arneja S, **Alvarez C**, **Reilly CW**. "Segond Fractures – Not Necessarily Pathognomonic of ACL Injury in the Pediatric Population". Clinical Journal of Sports Medicine (In Press 2009)
5. Dodwell E, **Reilly CW**, Fisher C, **Mulpuri K**. "A Quality Assessment of Randomized Controlled Trials in the Spine Literature". Spine (In Press 2009)
Beauchamp RD. Monthly "Sports Injuries" Running Room Magazine, Publ. Edmonton AB, 2009

6. Ramien ML, Prendiville, **Brown KLB**, and Cairns RA. "Cystic Bone Lesions in a Boy with Darier Disease: A Magnetic Resonance Imaging Assessment". *AM J Acad Dermatol*. 60:1062-1066, 2009
7. **Alvarez C**, De Vera M, Chhina HK, Williams L, Durlacher K, Kaga S. "The Use of Botulinum Type A Toxin in the Treatment of Idiopathic Clubfoot: Five-year Follow-up". *Journal of Pediatric Orthopaedics*, 2009, 29(6):570-5 (IF:1.152)
8. Lausen S, **Alvarez C**, Langlois S, Patel M. "Outcomes of Prenatally Diagnosed Isolated Clubfoot". *Ultrasound in Obstetrics and Gynaecology* (In Press, August 2009)
9. Marriage S, **Alvarez C**, Byrne A. "Obturator Internus Nerve Avulsion in Adolescent Hockey Player". *Clinical Journal of Sports Medicine* (Submitted April 2009)
10. **Reilly CW**, McEwan JA, Leveille L, Perdios A, **Mulpuri KM**. "Minimizing Tourniquet Pressure in Pediatric Anterior Cruciate Ligament Reconstructive Surgery: A Blinded, Prospective Randomized Controlled Trial". *Journal of Pediatric Orthopaedics*, Vol. 29, No. 3:275-280, April 2009
11. Slobogean GP, Giustini D, Verma A, Slobogean BLT, **Mulpuri K**, "MEDLINE, EMBASE, and Cochrane index most primary studies but not abstracts included in orthopaedic meta-analyses". *Journal of Clinical Epidemiology*, 2009;62:1261-7
12. Kennedy SA, Slobogean GP, **Mulpuri K**. "Does degree of immobilization influence refracture rate in the forearm buckle fracture?" *J Pediatr Orthop B*, 2010 Jan;19(1):77-81
13. Greaves LL, Van Toen C, Melnyk A, Koenig L, Zhu Q, Tredwell S, **Mulpuri K**, Cripton PA. "Pediatric and adult three-dimensional cervical spine kinematics: effect of age and sex through overall motion". *Spine*, 2009;15:1650-1657
14. Pike JM, **Mulpuri K**, Metzger MA, Ng G, Wells NJ, Goetz TJ. "Blinded, Prospective, Randomized, Clinical Trial Comparing Volar, Dorsal, and Custom Thermoplastic Splinting in the Treatment of Acute Mallet Finger: Level 2 Evidence". *J Hand Surg*. 2009;34 Suppl 1:44-45
15. Murnaghan ML, Slobogean BLT, Byrne A, Tredwell SJ, **Mulpuri K**. "The Effect of Surgical Timing on Operative Time and Quality of Reduction in Type III Supracondylar Humeral Fractures in Children". *J Child Orthop*. 2010;4:153-158
16. Vaccaro AR, Fisher CG, Whang PG, Patel AA, Prasad SK, Angevine PD, Mulpuri K, Thomas KC. "Evidence-based Recommendations for Spine Surgery". *Spine* 2010 Feb 26 [Epub ahead of print]
17. Burrows M, Liu D, Perdios A, Moore S, **Mulpuri K**, McKay H. "Assessing bone microstructure at the distal radius in children and adolescents using HR-pQCT: A Methodological pilot study". *J Clin Densitom*. Accepted February 2010
18. Varghese R, Chang J, **Miyanji F**, **Reilly CW**, **Mulpuri K**. "Publication of Abstracts Submitted to the Annual Meeting of the Pediatric Orthopaedic Society of North America: Is there a difference between accepted versus rejected abstracts?" *J Pediatr Orthop*. (Accepted February 2010)
19. Kelley SP, Cashin MS, Varghese RA, Douziech JR, **Mulpuri K**. "Levels of Evidence at the Pediatric Orthopaedic Society of North America (POSNA) Annual Meetings". *J Pediatr Orthop*. (Accepted March 2010)
20. Davidson D, **Mulpuri K**, Mathias RG. "Skeptical Thinking Series: An introduction to skeptical thinking in the evaluation of claims". *J Pediatr Orthop B*. (Accepted March 2010)
21. Dodwell E, Parisii E, Latorre J, Chandra D, **Mulpuri K**, Snyder B. "NSAID Exposure and Risk of Non-Union: A meta-analysis of case control and cohort studies". *Calcif Tis Int*. (Accepted March 2010)
22. Busse JW, Bhandari M, Guyatt GH, Heels-Ansdell D, Mandel S, Sanders D, Schemitsch E, Swiontkowski M, Tornetta P 3rd, Wai E, Walter SD, SPRINT Investigators (**Pirani S** collaborator). "Use of Both Short Musculoskeletal Function Assessment Questionnaire and Short Form-36 Among Tibial-Fracture Patients was Redundant", *J Clin Epidemiol* 2009 Nov;62(11):1210-7

SUCCESSFUL GRANT FUNDING

| Project Title | PI | Team | Granting Agency | Amount |
|---|--------------|---|---|-------------|
| Pediatric Orthopaedic Research Support | CW Reilly | F Miyanji | BCCH Foundation DuPuy | \$90,000 |
| Pediatric Orthopaedic Research Support | CW Reilly | | BCCH Foundation Circle of Care | \$20,000 |
| Treadmill Training | RD Beauchamp | Tamja Mayson, PT | BCCH Telethon BCMSF (Vancouver Foundation) | \$150,000 |
| iACT | RD Beauchamp | Val Ward, PT | BCCH Telethon CIHR | \$8100 |
| Operating Grant (5 yrs): Determining Genetic Linkage in Familial Clubfoot | J. Hecht | C. Alvarez | National Institutes for Health (USA) | \$22,000 |
| Mid-foot Break: A Clinical Description and a New Perspective | A. Black | C. Alvarez | BC Children's Hospital Telethon | \$24,565.20 |
| Comparative Effectiveness of Conservative and Non-Conservative Clubfoot Treatment using 3D Gait and Pedobarographic Outcomes | C. Alvarez | R. Beauchamp A. Black | UBC OREF | \$64,830 |
| Fassier-Duval Telescopic Intramedullary System in the Management of Osteogenesis Imperfecta | K. Mulpuri | | STELLA | \$2,100 |
| Taping vs splinting vs above elbow casting for Type I supracondylar fractures of the humerus in children; A randomized controlled trial | C.W. Reilly | K. Mulpuri, L. Dyke R. Jain, R. Varghese | iACT Synergy Grant | \$9,980 |
| An investigation into risk-taking behaviour, bone microstructure and fracture between the sexes: What underpins fracture in boys compared to girls during growth? | H. McKay | S.K. Boyd M. Burrows, L.C. Li H.M. Macdonald K. Khan, K. Mulpuri P-J. Naylor, R.E. Rhodes | Canadian Institutes of Health Research (2009-2013) | \$595,133 |
| Taping versus splinting versus above elbow casting for Type 1 Supracondylar fractures of the humerus in children: A randomized controlled trial | K. Mulpuri | C.W. Reilly | UBC Department of Orthopaedics Orthopaedic Research Excellence Fund (OREF) | \$25,000 |

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| Pediatric Orthopaedic Research Support | K. Mulpuri | | BCCH Foundation Circle of Care | \$20,000 |
| Hip function maintenance in cerebral palsy | K. Mulpuri | | Allergan | \$100,000 |
| Prospective Study of Motion Preservation Evaluation Below Fusions of the Thoracic Spine in Adolescent Idiopathic Scoliosis | F. Miyanji | | Harms Study Group Foundation | \$5,000 |
| Uganda Sustainable Clubfoot Project | S.P. Pirani | S. Siegler, R. Mathias J. Konde-Lule J. Amone, E. Naddumba F. Francheschi | CIDA | \$300,000/yr Over 6 yrs = \$1.8 million) (Til 2010) |
| Skeletal Development in Clubfoot Treatment | S.Siegler | S.P. Pirani, D. Hodges I. Ponseti, R. Brand J. Udupa, W. Morrison R. Merchant | NIH | \$311,325 |

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| Fellows Supervised | Renjit Varghese (India), Fellow, 2-year Academic Program, MSc, Health & Epidemiology, CP Database Project) |
| | Dr. Ayman Tadros (United Arab Emirates), 1-year Clinical Fellow |
| | Dr. Davor Saravanja (Australia), 6-month Spine Fellow |
| | Dr. Sean Comstock (Canada), 3-month Spine Fellow |
| | Dr. Christian Dipaola (USA), 3-month Spine Fellow |
| | Dr. Simon Kelley (United Kingdom), 6-month Trans-Canada Fellow |
| | Dr. Neil Saran (Canada), 1-year Clinical Fellow |
| | Dr. Megan Cashin (Canada), 1-year Clinical Fellow |
| Other | Dr. Zhuo Li (China), PEM International Fellow |
| | Dr. Xiuhong Zou (China), PEM International Fellow |
| | Dr. Abdulla Al Qanatani, PEM Fellow |

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| Residents Supervised (Jan-Dec 2009) | Dr. Duncan Jacks, PGY-5, UBC Orthopaedic Residency Program |
| | Dr. James Douglas, PGY-2/3, UBC Orthopaedic Residency Program |
| | Dr. Rhavi Ghag, PGY-1/2, UBC Orthopaedic Residency Program |
| | Dr. Sydney Yau, PGY-1, UBC Pediatric Residency Program |
| | Dr. Jason Bourque, PGY-5, UBC Orthopaedic Residency Program |
| | Dr. Shalinder Arneja, PGY-6, UBC Orthopaedic Residency Program |
| | Dr. Emily Dodwell, PGY-4/5, UBC Orthopaedic Residency Program |
| | Dr. Luke Pugh, PGY-2/3, UBC Orthopaedic Residency Program |
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| Residents Supervised (Jan-Dec 2009) | Dr. Michael Weber, PGY-4/5, UBC Orthopaedic Residency Program |
| | Dr. Sally Clark, PGY-5, UBC Orthopaedic Residency Program |
| | Dr. Paul Voorhoeve, PGY-1/2, UBC Orthopaedic Residency Program |
| | Dr. Darin Davidson, PGY-6, UBC Orthopaedic Residency Program |
| | Dr. Dina Popovic, PGY-4/5, UBC Orthopaedic Residency Program |
| | Dr. Chad Hiller, PGY-1/2, UBC Orthopaedic Residency Program |
| | Dr. Lukasz Soswa, PGY-1, UBC Orthopaedic Residency Program |
| | Dr. Jeffrey Douziech, PGY-1, UBC Orthopaedic Residency Program |
| | Dr. Kristin Taunton, PGY-2, UBC Orthopaedic Residency Program |
| | Dr. Kelly Apostle, PGY-5, UBC Orthopaedic Residency Program |
| | Dr. Sarah Freedman, PGY-2, UBC Pediatric Residency Program |
| | Dr. Tammie Dewan, PGY-4, UBC Pediatric Residency Program |
| | Dr. Gerard Slobogean, PGY-4, UBC Orthopaedic Residency Program |
| | Dr. Seemi Essa, PGY-3, UBC Pediatric Residency Program |
| | Dr. Kyle Winter, PGY-1, UBC Orthopaedic Residency Program |
| Students | 2nd Year Medical Students – 1 |
| | 3rd Year Medical Students – 32 |
| | 4th Year Medical Students – 14 |

COMMITTEE PARTICIPATION

Dr. Reilly

1. 2005-Present, Child and Family Research Institute, Member
2. 2006-Present, Centre for Hip Health, Member
3. 2002-Present, Royal College Subspecialty Committee, Member
4. 2005-Present, Orthopaedic Re-design Committee, BCCH, Member

Dr. Beauchamp

5. 1995-Present, Shriner's Gait Lab, Sunny Hill Health Centre, Medical Director (BCCH)
6. 1999-Present, Osteoporosis Group, BCCH, Member
7. 2007-Present, Quality of Care Surgical/Neurology, BCCH, Member
8. 2001-Present, Promotions Committee, UBC Orthopaedics, Member
9. 2001-Present, BCIT Program Advisory Committee, and Prosthetic & Orthotics Program, Member
10. 1991-Present, Gait and Clinical Motion Analysis Society, Member
11. 2004-Present, American Academy of Cerebral Palsy and Development Medicine, Member
12. 2006-Present, VANOC, Member

Dr. Alvarez

13. 2001-Present, Appointment, Reappointment, Promotion, Tenure (ARPT) Committee, UBC Department of Orthopaedics, Member
14. 2002-Present, Multiple Hereditary Exostoses (MHE) Scientific Advisory Board, Member

Dr. Mulpuri

15. 2006-Present, Centre for Hip Health, Member
16. 2006-Present, Office of Pediatric Surgical Evaluation and Innovation, Scientific Director
17. 2008-Present, Evidence Based Medicine Committee, Pediatric Orthopaedic Society of North America, Chair
18. 2009-Present, President's Subspecialty Advisory Council,



Canadian Orthopaedic Association, Member

19. 2005-Present , Research Committee on Child Restraint Seat Safety, BCCH, Member

20. 2009-Present , CFRI Acute Care and Surgical Cluster, BCCH,

PROJECTS AND INITIATIVES IN PROGRESS

Dr. Reilly

- 1.** The Effect of Femoral Nerve Block on Opioid Requirements Following Anterior Cruciate Ligament Reconstruction in the Paediatric Population: A Double Blind, Prospective, Randomized Controlled Trial – Data collection almost completed.
- 2.** Cervical Spine Injuries & Helmets – helmet testing underway.
- 3.** BrAIST: A Randomized Control Trial on Bracing Vs Watchful Waiting in Patients with Adolescent Idiopathic Scoliosis – data collection ongoing.
- 4.** Seating Pressure following Spine and Hip Surgery in Patients with Neuromuscular Disease – protocol development ongoing.
- 5.** PCA Vs Morphine Utilization following Posterior Instrumentation for

Idiopathic Scoliosis – manuscript preparation.

- 6.** Mental Health Disturbance in Adolescents following Acute Knee Injury (J Douglas) – protocol development.
- 7.** Risk Factors for Psychiatric Disorders Associated with Adolescent Idiopathic Scoliosis – ethics approval received; data collection to begin.
- 8.** Scoliosis and Wait Times – PHSI grant submission preparation underway.
- 9.** The Impact of Scoliosis and Wait Times on Treatment and Outcomes – data collection.
- 10.** Harms Study Group – Scheuermann's Kyphosis – data collection ongoing.
- 11.** Harms Study Group – AIS Database – data collection ongoing.
- 12.** Harms Study Group – AIS 2-year post-operative motion – data collection ongoing.
- 13.** Harms Study Group – Cerebral Palsy and Scoliosis – ethics approval received; contract negotiations underway with UBC and Harms Study Group.

14. Adolescent idiopathic Scoliosis: Anterior and Posterior Instrumentation Vs Posterior Instrumentation Alone – protocol development.
15. The Relationship between Body Mass Index and Pedicle Morphology in Adolescent Idiopathic Scoliosis: A Computerized Tomography Study – protocol development.
16. Mulpuri K, Jain R, Dyke L, Varghese R, Miyanji F, Reilly CW. “Taping vs splinting vs above elbow casting for Type I supracondylar fractures of the humerus in children: A randomized controlled trial”

Dr. Brown

Ewing Sarcoma - 2009

17. Wrote the surgical guidelines for the new Metastatic Study AEWS09P2.
18. Wrote the surgical guidelines for the new non-Metastatic Ewing Sarcoma study which will be launched in 2010. Enrolment of 770 patients is expected over the next 5 years. In September we began a collaboration with radiation oncologists other surgeons, pathologists and imagers and oncologists to create specific aims for the study and change the parameters of local control which include a new definition of surgical margins and decreased radiation therapy for tumors with >90% necrosis, this will be the first COG sarcoma study which will assess patient Quality of Life outcome. For the first time we will have real-time access to imaging studies and surgeons and radiation oncologists are partnering in assessment of results of therapy in different sites.

Establish Vancouver as a Centre of Excellence for Fitbone Surgery in Canada, 2009

19. Perform the first Fitbone surgery in Canada with 2 visiting surgeons from Dallas and Adelaide, March 3, 2009.
20. Begin to develop a business plan with Dr. Piotr Blachut and Dr. Pierre Guy at Vancouver General Hospital to perform 10 Fitbone surgeries per year, impact on hospital budgets is current impasse.

Learn Technique and Application of Intraoperative Imaging 2009

21. Joined the Intraoperative Imaging Society and attended second annual meeting in Istanbul June 2009 to see how others had utilized intraoperative imaging for patient care.
22. Attended Brainlab instruction session at AAOS.
23. Learned techniques of navigation in new OR suite with Brainlab and

Siemens personnel

24. Excised 6 tumors, grafted a para-acetabular ABC, performed distal femoral lengthening, reconstructed tibia plateau in patient with meningococemia, utilized navigation to perform cuts in large pelvic osteosarcoma.

Dr. Alvarez

Clubfoot

25. Alvarez C, DeVera M, Chhina HK, Williams L, Durlacher K, Kaga S. Two-year clinical and pedobarographic outcome of children with idiopathic clubfoot treated with manipulation, casting and adjuvant Botulinum A toxin. Proposed venue: Journal of Bone and Joint Surgery (80% completed, data collected and preparing the manuscript).
26. Case Report: Peroneal Nerve Palsy in Clubfoot Population (data collected and preparing manuscript).
27. A Double-Blind, Randomized Control Trial Comparing Botulinum A toxin and Placebo in the Treatment of idiopathic Clubfoot in progress since 2006 with 30 participants enrolled to date at BCCH site (ongoing data collection).
28. Genetic Studies of Clubfoot (CTEV) is a collaborative project with the University of Houston Texas to explore the genetic causes of clubfoot which is in progress since 2005 (ongoing data collection).

Hereditary Multiple Exostoses

29. Quality of Life in Hereditary Multiple Exostoses and Disease specific questionnaire (data collection complete, analysis and manuscript preparation underway).
30. Genotype-Phenotype – Quality of Life correlation in Hereditary Multiple Exostoses (ongoing data collection).

Gait

31. Pedobarographic profile of clubfoot patients (data collection complete, analysis and manuscript preparation underway).
32. Gait analysis of clubfoot patients (ongoing data collection).
33. Mid-foot Break: A clinical description and a new perspective (ongoing data collection, analysis and manuscript preparation underway).
34. Crouch Gait in children with Cerebral Palsy (ongoing data collection).

35. Genotype-Phenotype – Quality of Life correlation in Hereditary Multiple Exostoses (ongoing data collection).

Dr. Mulpuri

36. Mulpuri K, Reilly CW, Tredwell SJ. “Management of Displaced Supracondylar Fractures of the Humerus Using Lateral versus Cross K wires: A Prospective Randomized Clinical Trial
37. Reilly CW, Ansermino M, Mulpuri K, Purdy FR, Tredwell SJ. “The Effect of Femoral Nerve Block on Opioid Requirements following Anterior Cruciate Ligament Reconstruction in the Paediatric Population: A Double-Blind, Prospective, Randomized Controlled Trial
38. Mulpuri K, Ansermino M, Montgomery C, Purdy R, Lehman W, Reilly CW, Tredwell SJ. “The Effect of Femoral Nerve Block on Morphine Requirements following Intramedullary Nailing of Femoral Fractures In Paediatric Patients”
39. Varghese R, Slobogean BL, Mulpuri K. “Inter and intra-observer reliability of classification systems in Perthes’ Disease”
40. Mulpuri K, Dodwell E, Slobogean BLT, Wilson D, “dGEMRIC and Perthes’ Disease”
41. Mulpuri K, Jain R, Dyke L, Varghese R, Miyanji F, Reilly CW. “Taping vs splinting vs above elbow casting for Type I supracondylar fractures of the humerus in children: A randomized controlled trial”
42. Mulpuri K, Cashin MS. “Outcome analysis of comminuted vs non-comminuted paediatric femur fractures treated with elastic intramedullary nail fixation”.

Dr. Miyanji

43. Miyanji F, Mahar A, Oka R, Newton PO. “Cervical Spine Instrumentation: An alternative to lateral mass screws”
44. Miyanji F, Newton PO, Perry A, Vanvalin S, Pawlek J. “Analysis of the Lenke 1A Curve classification: Defining 2 Sub-types based on L4 tilt”
45. Miyanji F, Govender P, Lewis SJ. “Anterior Column Reconstruction in the Treatment of Metastatic Lesions Of the Upper Cervical Spine”
46. Miyanji F, Lewis SJ. “Complications following the use of Bioglue Surgical Adhesive as an Adjunct to Dural Repair in Spinal Surgery”
47. Mulpuri K, Jain R, Dyke L, Varghese R, Miyanji F, Reilly CW.

“Taping vs splinting vs above elbow casting for Type I supracondylar fractures of the humerus in children: A randomized controlled trial”

Dr. Pirani

48. A reliable and valid method of evaluating amount of deformity in the congenital clubfoot.
49. “The Parents Guide to Clubfoot and its Treatment With the Ponseti Method”, S Pirani co-authored, to be published by the Canadian Orthopaedic Foundation.
50. The Uganda Sustainable Clubfoot Care Project
- a. Incidence Survey
 - b. Ethnocultural Survey of Clubfoot in Uganda
 - c. Outcome Evaluation
51. Skeletal Development in Clubfoot Treatment.

DIVISION OF PEDIATRIC OTOLARYNGOLOGY

50



Dr. Frederick K. Kozak,
Division Head



Dr. Jeffrey P
Ludemann



Dr. J. Paul Moxham

Academic Highlights

TEAM: 2009-10

Faculty:

Dr. Frederick K. Kozak, Division Head

Dr. Jeffrey P. Ludemann

Dr. J. Paul Moxham

Other Staff Members

Ms. Patsy Regan, Pediatric Otolaryngology Clinical Nurse

Ms. Michelle Freeman, MOA to Dr. Kozak

Ms. Nancy Davies (maternity leave), MOA to Drs. Ludemann & Moxham

Ms. Christina Lo, MOA to Drs. Ludemann & Moxham

Ms. Michele Poulsson, MOA to Drs. Ludemann & Moxham

HIGHLIGHTS AND ACHIEVEMENTS

Following an extensive search over the past eighteen months, Dr. Neil Chadha was unanimously selected to join the Division. Dr. Chadha trained in Great Britain and recently completed a Pediatric Otolaryngology Fellowship at the Hospital for Sick Children in Toronto. He will commence his practice on July 1, 2010.

After 29 years of service at BC Hildren's Hospital at the Oak Street site, Dr. Keith Riding retired on June 30, 2009. The division wishes Dr. Riding a long and happy retirement.

The UBC Otolaryngology Residency Training Program was successfully reviewed by the Royal College Physicians and Surgeons of Canada under Dr. Moxham's guidance as Program Director.

Dr. Kozak travelled to Uganda in November 2009 with the OPSEI and Rotary Hearing Foundation groups on a medical volunteer mission. He also spent time working on the development of a hearing health initiative with the WATOTO orphanage in Kampala.

PRESENTATIONS

Dr. Kozak

1. "Vocal fold Immobility in Pediatric Cardiac Surgery Patients." 15th Annual Chung Research Day. Vancouver, B.C. November 9, 2009
2. "Acquired Hearing Loss in Children with Cancer." Canadian Association of Psychosocial Psychology Meeting. Vancouver, Canada April 2-4 2009 (poster)
3. "Landau Kleffner Syndrome. A Rare auditory Processing Disorder." SENTAC Annual Meeting. Salt Lake City Utah. December 4, 2009
4. "Adenoidectomy and EUA of Ears in Cranial Conjoined Twins: Surgical and anesthetic Challenges." SENTAC Annual Meeting. Salt Lake City, Utah. December 6, 2009
5. "Standard of Care For Immunization Recommendations for Cochlear Implant Patients in BC." Canadian Cochlear Implant Centres Group Meeting. Toronto, Ontario. October 30, 2009
6. "Does Function Define Form? Sinonasal Development in Patients with Unilateral Choanal Atresia" Canadian Otolaryngology Society Annual Meeting. Halifax, NS. May 2009. (podium) American Society of Pediatric Otolaryngology Meeting. Seattle. June, 2009. (poster)
7. "Evolution of a Cochlear Implant Program: The BC Children's Hospital Program." CI 2009 International Meeting. Seattle. June, 2009. (poster)
8. "Reversal of Hearing Loss in Chronic Myeloid Leukemia: A Case Report." SENTAC Annual Meeting. Salt Lake City, Utah. December 4-6, 2009. (poster)
9. "Nasopharyngeal Choriostoma: An unusual and rare cause of acute respiratory distress in the newborn." SENTAC Annual Meeting. Salt Lake City, Utah. December 4-6, 2009. (poster)
10. "Unexpected Residual 'Hearing' in Children with Hypoplastic/Absent Cochlear Nerves." SENTAC Annual Meeting. Salt Lake City, Utah. December 4-6, 2009. (poster)
11. "Broad Challenges in Care of Children." SENTAC Annual Meeting. Salt Lake City, Utah. December 4, 2009.
12. "Sensorineural Hearing Loss Among Survivors of Congenital Diaphragmatic Hernia." SENTAC Annual Meeting. Salt Lake City,

Utah. December 4-6, 2009. (poster)

Dr. Ludemann

13. "Does Function Define Form? Sinonasal Development in Patients with Unilateral Choanal Atresia" Canadian Otolaryngology Society Annual Meeting. Halifax, Nova Scotia. May 2009. (podium) American Society of Pediatric Otolaryngology Meeting. Seattle, Washington. June 2009. (poster)
14. "Vocal Fold Immobility in Pediatric Cardiac Surgery Patients." 15th Annual UBC Chung Research Day. Vancouver, B.C. November 9, 2009
15. "Rational use of Hyperflex™ Tracheostomy Tubes." 12th International Conference on Home Mechanical Ventilation. Barcelona, Spain. March 2009. (poster)
16. "Foreign Bodies in Little Airways: Diagnosis, Treatment and Prevention." BC Pediatric Society Update on Young Airways. Feb 11, 2009
17. "Aerodigestive Diseases." Moderator - Podium Presentations, ASPO Annual Meeting. Seattle, Washington. May 25, 2009

Dr. Moxham

18. "Characterization of abnormalities on balance testing in a pediatric referral population with vertigo." American Laryngological, Rhinological, and Otolological Society, combined sections meeting. Orlando, Florida. Feb 2010
19. "TGF-beta1 exhibits synergy with oncostatin-M in a rabbit critical calvarial defect model." American Laryngological, Rhinological, and Otolological Society, combined sections meeting. Orlando, Florida. Feb 2010
20. "Cat-scratch disease presenting as mastoiditis." American Laryngological, Rhinological, and Otolological Society, combined sections meeting. Orlando, FL. Feb 2010
21. "Does Function Define Form? Sinonasal Development in Patients with Unilateral Choanal Atresia." Canadian Otolaryngology Society Annual Meeting. Halifax, Nova Scotia. May 2009. (podium) American Society of Pediatric Otolaryngology Meeting. Seattle, Washington. June 2009. (poster)

22. "Vocal fold Immobility in Pediatric Cardiac Surgery Patients." 15th Annual UBC Chung Research Day. Vancouver, B.C. November 9, 2009

LECTURES:

Dr. Kozak

1. Biannual Pediatric Otolaryngology Lecture Series for UBC Otolaryngology Residents September – December 2009
Cochlear Implantation: The Basics
Cochlear Implantation: The Challenges
Sensorineural Hearing Loss
Auditory Neuropathy
Tourette syndrome and Otolaryngology
2. Disorders of the Ear. Third Year Lecture, UBC Medical School. January 12, 2010
3. Hands-on Workshop in Pediatric Otology for Family Physicians. BC Children's Hospital April 6, 2009.
4. INDE 410 Clinical Skills Session for First Year UBC Medical Students. April 22, 2009

Dr. Ludemann

5. Biannual Pediatric Otolaryngology Lecture Series for UBC Otolaryngology Residents September – December 2009
CanMeds Health Advocate Role
Chevalier Jackson Lecture
Foreign Bodies: Airway and Esophageal
6. "The Neonatal Airway." UBC Neonatology Education Day. BC Children's Hospital. November 5, 2009
7. "The Neonatal Airway." Fraser Health Association Neonatology Symposium. Royal Columbian Hospital. November 20, 2009
8. "Fishbone Causing a Tracheoesophageal Abscess." UBC Otolaryngology Grand Rounds (supervised). Feb 2009
9. "CanMEDS Health Advocate Role." UBC Otolaryngology Grand Rounds (co-presenter) Apr 2009
10. "Choking on Heavy Metal (Dental Clamp in the Esophagus and Air Rifle Pellets in the Bronchi." UBC Otolaryngology Grand Rounds (supervised). Sept 2009

Dr. Moxham

11. Biannual Pediatric Otolaryngology Lecture Series for UBC Otolaryngology Residents September – December 2009.
Sleep Apnea
Juvenile Nasopharyngeal Angiofibromas
Pediatric Sinusitis
Choanal Atresia
12. Review of Pediatric Otolaryngology for UBC Pediatric residents -2009

FORMAL TEACHING

Dr. Ludemann

1. UBC Medical INDE 410, Clinical Skills in Otolaryngology, April 14, 2009, 2 hours
2. Hearing Loss and Dizziness, Third Year Clerkship Seminar, May 5, 2009, 1.5 hrs

PUBLICATIONS APR 1, 2009 TO MAR 31, 2010

1. Dance D, Riley M, **Ludemann JP**. Removal of ear canal foreign bodies: What can go wrong and when to refer. BCMJ, 51(1), 20-24, Jan-Feb 2009.
2. Brown ED, Chau JK, Atashband S, Westerberg BD, **Kozak FK**. A systematic review of neonatal toxoplasmosis exposure and sensorineural hearing loss. Int J Pediatr Otorhinolaryngol. 2009 May;73(5):707-11. Epub 2009 Feb 11.
3. Westerberg BD, **Kozak FK**, Thomas EE, Blondel-Hill E, Brunstein JD, Patrick DM. Is the healthy middle ear a normally sterile site? Otol Neurotol. 2009 Feb;30(2):174-7.
4. Chau J, Atashband S, Chang E, Westerberg BD, **Kozak FK**. A systematic review of pediatric sensorineural hearing loss in congenital syphilis. Int J Pediatr Otorhinolaryngol. 2009 Jun;73(6):787-92. Epub 2009 Mar 24.
5. Dickson M, Riding KR, **Ludemann JP**. Utility and Safety of Methylene Blue Demarcation of Preauricular Sinuses and Branchial Sinuses and Fistulae in Children. J Otolaryngol 38(2): 302-10, April 2009.

6. **Kozak FK.** Exchanges in acute otitis externa. Parkhurst Exchange Journal. May 2009. (non refereed)
7. **Moxham JP,** Dickson JM, **Ludemann JP,** Sargent MA. Cochlear nerve aplasia detected through kindergarten hearing screening – a series of eight cases. J Otolaryngology 38(3): 409-15, June 2009.
8. Hartl T, **Moxham JP, Ludemann JP,** Rassekh SR. Inflammatory myofibroblastic tumour of the subglottis in a 5-year-old. J Otolaryngol Head Neck Surg. 2009 Jun;38(3):E104-6.
9. Allan LL, Hoeffl K, Zheng DJ, Chung BK, **Kozak FK,** Tan R, van den Elzen P. Apolipoprotein-mediated lipid antigen presentation in B cells provides a pathway for innate help by NKT cells.. Blood. 2009 Sep 17;114(12):2411-6. Epub 2009 Jul 20.
10. Carpes LF, **Kozak FK.** Cochlear Implantation in Children with Additional Disability: A Closer Look at Cognitive Delay. VIII Inter American Association of Pediatric Otolaryngology Manual of Pediatric Otorhinolaryngology. August 2009. 272-279. (by invitation, non refereed)
11. Thamboo A, Nguyen T, **Ludemann JP.** Choking Prevention: Short-Comings of Traditional Public Education Campaigns, Prompting the Development of Web-Based Interactive Teaching Tools for Pre-Teens, Teenagers and Adults. J Otolaryngol, 38(6): 646-51, Dec 2009.
12. Otitis Media:Acute Otitis Media (AOM) & Otitis Media with Effusion (OME). Guidelines and Protocols Advisory Committee. BC Medical Association. January 1, 2010. **Kozak FK** Co-author
13. **Ludemann JP,** Poskitt K, Singhal A. Intracranial hypertension secondary to sigmoid sinus compression by a group A streptococcal epidural abscess. J Laryngol Otol (2010), 124, 93–95.
14. MacNeil SD, **Moxham JP.** Review of floor of mouth dysontogenic cysts. Ann Otol Rhinol Laryngol. 2010 Mar;119(3):165.

SUCCESSFUL GRANT FUNDING

| Project Title | PI | Team | Granting Agency | Amount |
|---|-------------|---------------------------------------|-----------------------------------|----------|
| Choking Prevention: animated video and interactive website (educational validation) 2008-2010 | Nashson S | Ludemann JP | Hampton Fund | \$50,350 |
| Detection of Congenital CMV infection to improve universal screening for hearing loss in children 2008-2010 | Castillo E | Kozak FK, Money D, Dobson S, Thomas E | BCCH Foundation Telethon Funds | \$30,000 |
| Evaluation of ciliary beat frequency and beat pattern in children with chronic nasal and respiratory symptoms: a new non-invasive method to improve diagnosis 2009-2011 | Chilvers, M | Kozak FK | BCCH Foundation Telethon Funds | \$30,000 |

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|---------------------------|---|
| Fellows Supervised | Dr. Marcela Fandino (Colombia) Clinical Pediatric Otolaryngology Fellow. |
| | Dr. Luthiana Carpes (Brasil) Clinical Research Pediatric Otolaryngology Fellow and Masters Graduate Student |
| Residents Supervised | Dr. Veronique Cheung, R1 |
| | Dr. Andrew Thamboo, R1 |
| | Dr. Trevor Hartl, R1 |
| | Dr. Elaheh Akbari, R2 |
| | Dr. Pia Pace-Asciak, R2 |
| | Dr. Anali Dadgostar, R2 |
| | Dr. Rob Mondin, R2 |
| | Dr. Estelle Chang, R3 |
| | Dr. Anil Sharma, R3 |
| | Dr. Bedy Lau, R4 |
| | Dr. Danielle MacNeil, R4 |
| | Dr. Paul Mick, R5 |
| | Dr. Eric Brown, R5 |
| | Dr. Jon Ivar Mickelson, R5 |
| | Dr. Neal Shoman, R5 |
| | Dr. Kevin Wong, R5 |
| Students | 50 Medical Students and 20 Residents from either family practice, pediatrics or dentistry undertook electives in the Division of Pediatric otolaryngology under the supervision of Drs. Kozak, Ludemann and Moxham. |
| Medical Student Electives | Dr. Kozak Melanie Lecavalier Year Four, University of Ottawa – Research Elective December 7-18, 2009 |

COMMITTEE PARTICIPATION

Dr. Kozak

1. Children's and Women's Health Centre Project Advisory Committee
 2. Children's and Women's Health Centre Redevelopment Steering Committee
 3. BCCH Department of Pediatric Surgical Cabinet
 4. Chair Division of Pediatric Otolaryngology Fellowship Committee
 5. Surgical Services Advisory Committee, BCCH
 6. Medical Staff Association Nominating Committee, BCCH
 7. Medical Staff Association Site Redevelopment Working Party, BCCH
 8. Selection Committee for Division of Otolaryngology Chair, UBC
 9. Otolaryngology Executive Committee, UBC
 10. CSOHNS Council
 11. Scientific Chair Elect CSOHNS
 12. Western Canada Cochlear Surgeons Focus Group
 13. SENTAC(Society of Ear Nose and Throat Advances in Children) Board Member
 14. BCMJ Otitis Media Guidelines Committee
 15. Inter American Association of Pediatric Otolaryngology Board Member, Canadian Representative
 16. Chair, Medical Advisory Committee, B.C. Early Hearing Program
 17. CI-2009 12th International Symposium on Cochlear Implants in Children Organizing Committee
 18. ASPO 2009 Poster Judge Committee
 19. Recurrent Respiratory Papilloma Task Force
- Dr. Ludemann
20. Selection Committee for Division of Otolaryngology Chair
 21. Director of Otolaryngology Undergraduate Education January – September 2009

22. Innovative Therapy Committee, BCCH

Dr. Moxham

23. Selection Committee Participant for Division of Otolaryngology Chair

24. Laser Safety Committee, BCCH, Sept 2009-present

25. Otolaryngology Executive Committee

26. Postgraduate Otolaryngology Education (RPC) Committee

27. Full Faculty Residency Education Committee

PROJECTS AND INITIATIVES IN PROGRESS

Dr. Kozak

1. Ossicular Chain Reconstruction: QA review

2. Conjoined Twins: Case Report

3. Landau-Kleffner syndrome: Case Series

4. V37I Homozygous and Heterozygous SNHL

Dr. Ludemann

5. Media campaign (via Safe Start and Public Relations at BC's Children's Hospital)

6. Interactive computerized learning modules on the management of esophageal disc batteries, bronchial nuts (and other upper aerodigestive foreign bodies) for medical students and residents (via Center for Excellence in Surgical Education and Innovation at VGH); in progress

7. Animated video and interactive, educational "don't choke" website for children, parents, teachers, daycare instructors and babysitters (with validation of knowledge transfer to students in grades 5 and 10 by Dr. Samson Nashon, Assistant Professor, UBC Department of Education)

8. Review of Management of First Branchial Cysts and Sinuses

Dr. Moxham

9. Choanal Atresia, BCCH Experience

10. Pediatric Meniere's Disease

11. Review of Management of First Branchial Cysts and Sinuses

12. Review of Bone Growth Factors

OTHER NOTEWORTHY ENDEAVOURS

Dr. Kozak

1. Oral Exam Preparation for UBC Otolaryngology Senior Residents June 2009

2. Pediatric Cochlear Implantation. Rotary Club of Vancouver Bike-A-Thon Kick Off Luncheon Presentation. June 2009 and Guest Speaker at Bike-A-Thon Banquet July 12, 2009

3. Year 3 Surgical Clerkship Examiner December 17, 2009

4. Journal Reviewer
Otolaryngology-Head and Neck Surgery
International Journal of Pediatric Otolaryngology
Journal of Otolaryngology-Head and Neck Surgery
Rural and Remote Health

5. Outreach Clinics to the Sunshine Coast and Prince George

Dr. Ludemann

6. Consultant re: Choking Prevention (gel candies), Canadian Food Inspection Agency, Jan 8, 2009

7. Halloween Safety Tips from BC Children's Hospital (Oct 16, 2008 and Oct 22, 2009 press releases)

8. Storz EndoWorld monograph for "Vancouver" forceps (designed to facilitate removal of nut fragments and other small objects from distal bronchi with improved visualization, to decrease the potential need for thoracotomy and bronchotomy); launched at ASPO 2009

9. Outreach to Fort Nelson Hospital

10. Journal Reviewer
Diagnostic and Therapeutic Endoscopy
Cases Journal

Dr. Moxham

11. Oral Exam Preparation for UBC Otolaryngology Senior Residents June 2009

12. Journal reviewer
Journal of Otolaryngology-Head Neck Surgery
Laryngoscope
International Journal of Pediatric Otolaryngology

THE DIVISION OF PEDIATRIC PLASTIC SURGERY



Dr. Cynthia Verchere,
Division Head



Dr. Douglas J
Courtemanche



Dr. Jugpal Arneja



Dr. Kevin Bush

Academic Highlights

TEAM: 2009-10

Faculty:

Dr. Cynthia Verchere, Division Head

Dr. Douglas J Courtemanche

Dr. Jugpal Arneja

Dr. Kevin Bush

Dr. Mark Hill

Dr. Sean Bristol

Other Staff Members

Ms. Norine Mayede, Division Administrative Assistant & Medical Office Assistant to Dr. Verchere

Ms. Angie Kennedy, MSc, Research Coordinator

Ms. Rupinder Parhar, Medical Office Assistant to Dr. Courtemanche

Ms. Simone Fisher, Medical Office Assistant to Dr. Arneja

Ms. Lee Heng, Office Assistant

HIGHLIGHTS AND ACHIEVEMENTS

Dr. Verchere

- Invited Speaker. "Current Management of Pediatric Burns at BC Children's Hospital". European Club for Pediatric Burns
- Visiting Professor. "The Acolyte Conundrum." Hospital for Sick Children, Toronto, ON
- Visiting Professor, "Current Management of Pediatric Burns at BC Children's Hospital". St. Justine Hospital, Montreal, QC
- Dr. Courtemanche
- Rotaplast Medical Mission – Bahir Dar, Ethiopia, November 2009
- Ride 2 Survive, 2009

Dr. Arneja

- Smile Train Visiting Plastic Surgeon- Sir Ganga Ram Hospital, New Delhi, India November 2009
- 2010 Entrance Scholarship (\$5000), Executive Masters of Business Administration (EMBA), Sauder School of Business, University of British Columbia

PRESENTATIONS

Dr. Verchere

1. “Teaching practices of cleft lip and palate surgeons in North America”, Plastic Surgery Annual Research Day, Faculty of Medicine, University of British Columbia, Vancouver, BC April 3, 2009

Dr. Courtemanche

2. “Complex neurofibromas of the scalp: a case series.” American Federation for Medical Research, Western Regional Meeting, Carmel CA, 30 January 2009

Dr. Arneja

3. “Qualitative and Quantitative Outcomes of Audience Response Systems as an Educational Tool in a Plastic Surgery Residency Program”. University of British Columbia/British Columbia Children’s Hospital OPSEI Rounds, Vancouver, BC. July 2009
4. “An Algorithm for the Management of Infantile Hemangiomas in Sensitive Facial Anatomical Regions.” International Confederation for Plastic, Reconstructive and Aesthetic Surgery, New Delhi, India, November 2009
5. “Vascular Anomalies: Current Evaluation and Management of Hemangiomas and Vascular Malformations” (Instructional Course) American Society of Plastic Surgeons, Seattle, WA, October 2009
6. “Qualitative and Quantitative Outcomes of Audience Response Systems as an Educational Tool in a Plastic Surgery Residency Program.” Plastic Surgery Research Council, Pittsburgh, PA May 2009 and RCPSC International Conference on Residency Education, Victoria, BC September 2009
7. “Bilateral Clefts of the Primary Palate: Refinements in Orthodontic

and Operative Techniques. Canadian Society of Plastic Surgeons.” Kelowna, BC June 2009 and International Confederation for Plastic, Reconstructive and Aesthetic Surgery, New Delhi, India, November 2009

LECTURES:

Dr. Arneja

1. “Plastic Surgery.” University of British Columbia Pre-Medical Society, Vancouver, BC, March 2010

PUBLICATIONS APR 1, 2009 TO MAR 31, 2010

1. **Verchere C.** Acquired (Chapter 1) Section: Mobius Syndrom (p2) – Congenital (Chapter 3) Sections: Cleft Lip Alveolus (p29); Hemifacial Microsomia – Multisystem (p40); Kernahan Striped-Y (p49); Modified Kernahan Striped-Y (p51); Congenital Nasal Anomalies (p51) – Oxley Paul J (ed). Classifications in Facial Plastic Surgery, 1st Edition. Plural Publishing Inc, San Diego, CA. (2009)
2. Peters DA, **Courtemanche DJ.** Role of platelet gel and calcium-coated Lactosorb membranes in healing critical calvarial defects. J Craniofac Surg. 2009 Nov;20(6):2200-4.
3. **Courtemanche DJ.** TMJ Disk Disease. In: Oxley Paul J (ed). Classifications in Facial Plastic Surgery, 1st Edition. Plural Publishing Inc, San Diego, CA. 2009, p 6. Tanzer Classification of Constricted Ear. IBID p 30. Frontoethmoidal encephalomeningocele. IBID p 57. Vancouver Burn Scar Score. IBID p156. Schobinger Classification. IBID p183
4. Grewal KS, Heran MK, **Courtemanche DJ.** Complex neurofibromas of the scalp: a case series. J Invest Med 58(1):247, 2010.
5. **Arneja JS,** Narasimhan K, Bouwman D, Bridge PD. Qualitative and quantitative outcomes of audience response systems as an educational tool in a plastic surgery residency program. Plast Reconstr Surg. 2009 Dec;124(6):2179-84.
6. **Arneja JS,** Gosain AK. Giant congenital melanocytic nevi. Plast Reconstr Surg. 2009 Jul;124(1 Suppl):1e-13e.

7. **Arneja JS**, Mulliken JB. Resection of amblyogenic periocular hemangiomas: indications and outcomes. *Plast Reconstr Surg*. 2010 Jan;125(1):274-81.
8. **Arneja JS**, and Gosain,A.K. Velopharyngeal Incompetence. In: Lin, S. and Hijjawi, J., (eds.) *Plastic Surgery Pearls of Wisdom*, 2nd Ed. New York: McGraw Hill (2009)
9. **Arneja JS** and Gosain A.K. Congenital nevus. In: Guyuron B, Eriksson E., Persing JA, Chung K, Gosain AK, Disa J, Rubin PJ (eds.), *Plastic Surgery: Indications and Practice*. Philadelphia: Elsevier, Inc., 2009, 659-670.

| | |
|--------------------------------------|---|
| Fellows Supervised | Dr. Jason Neil-Dwyer (England), Clinical Fellow – Pediatric Plastic Surgery |
| | Dr. Alex Benson (England), Clinical Fellow – Pediatric Plastic Surgery |
| | Dr. Avi Goldberg (Canada) Research Fellow – Cleft Palate Program |
| Residents Supervised | Dr. Steve Meredith, RV, Plastic Surgery |
| | Dr. Alex Seal, RIV and RV, Plastic Surgery |
| | Dr. Farrah Yau, RIV, Plastic Surgery |
| | Dr. Jenny Cheng, RV, Plastic Surgery |
| | Dr. Asif Pirani, RIV, Plastic Surgery |
| Students <i>Research Students</i> | Mr. Karan Grewal |
| | Mr. Iman Hemmati |
| | Ms. Ronak Rahmanian |
| | Mr. Colin McInnes |

SUCCESSFUL GRANT FUNDING

| Project Title | PI | Team | Granting Agency | Amount |
|---|------------|---------------|---|----------|
| Craniofacial Distraction and Splint Fabrication | Bush K | | Office of Pediatric Surgical Evaluation and Innovation - STELLA | \$4,000 |
| Why is my child falling down? Does a brachial plexus injury at birth lead to long-term coordination and balance problems? | Verchere C | Bellows D | BC Children's Hospital Foundation Telethon Awards Competition | \$29,365 |
| Management of Infantile Hemangiomas with Beta-Blocker Therapy | Arneja J | Prendiville J | Rare Disease Foundation Microgrant | \$1,750 |
| The SUP-ER Splint: a splint for infants with brachial plexus birth palsy to improve SUPination and External Rotation | Verchere C | Durlacher K | iACT Synergy Grant | \$1,050 |
| Parry-Romberg Disease: a CT study to evaluate bone morphology | Bush K | Prendiville J | Rare Disease Foundation Microgrant | \$3,375 |

PROJECTS AND INITIATIVES IN PROGRESS

Dr. Verchere

1. Teaching Practices among Cleft Lip and Palate Surgeons in North America
2. Brachial Plexus Injuries: the Long-term Impact on Balance and Coordination
3. The use of Sup-ER Splints to Improve Shoulder External Rotation in Children with Brachial Plexus Injuries
4. Too Hot for Tots! – A Pilot Project to Evaluate the Impact of an educational DVD
5. Minimal access surgical technique of sural nerve harvest in pediatric patients: a new technique
6. VAD placement: Does location on the child's torso have an impact on the long-term scar quality?
7. A Question of Ethics: How does the ethical review process affect the productivity of faculty and post-graduate trainees?
8. The use of Intrasite Gel and Acticoat for the Treatment of Pediatric Burns

Dr. Courtemanche

9. Safety Scalpels: A Systematic Review
10. Maxillary Outgrowth after Repair of a Cleft of the soft Palate: An Analysis between the Wardill-Kilner and Furlow palatoplasty
11. The Role of Experts in Teaching in a Plastic Surgery Residency Program
12. Complex Neurofibromas of the Scalp: a case series
13. The Vancouver Burn Score: a 20 year review of citations
14. The Clinical Outcomes Following the Use of LactoSorb Fixation in Craniofacial Reconstruction

Dr. Arneja

15. Management of Infantile Hemangiomas with Beta-Blocker Therapy
16. A ten-year, two institution review of dog attacks: advocating for nationwide prohibition of dangerous dogs
17. Factors associated with private or public practice in plastic surgery

Dr. Bush

18. Acute Hand and Wrist Injuries Sustained during Recreational Mountain Biking
19. Plastic Surgery Trauma Assessment Record
20. Parry-Romberg's Disease: a case series and description of orbital growth related to age of onset



Kevin Bush winner of A.D. Forward Postgraduate Faculty Teaching Award 2010

DIVISION OF PEDIATRIC UROLOGY

60



Dr. Andrew E
MacNeily, Division
Head



Dr. John Masterson,
Associate Head,
Clinical Affairs



Dr. Kourosh Afshar



Dr. Jennifer
Mickelson

Academic Highlights

TEAM: 2009-10

Faculty:

Dr. Andrew E MacNeily, Division Head

Dr. John ST Masterson, Acting Head, Department of Pediatric Surgery

Dr. Kourosh Afshar

Dr. Jennifer Mickelson

Other Staff Members

Ms. Heidi Barber, Pediatric Urology Nurse Clinician

Ms. Farahnaz Ganjizadeh, Pediatric Urology Research Associate

Ms. Danielle Baghii, Administrative Assistant

Ms. Maria Chaperon, Administrative Assistant

HIGHLIGHTS AND ACHIEVEMENTS

As the only pediatric urology service in British Columbia, the Division of Pediatric Urology at BC Children's performed more than 900 surgical procedures and cared for over 6,000 children in our ambulatory clinic this year. Last year realized many successes for our small team which are detailed in this report.

Some notable highlights include the following: Dr. Masterson was appointed to the position of interim head, Dept of Pediatric Surgery. He continues in his role as Associate Head of Clinical Affairs, a position of great responsibility with respect to the day-to-day management of the operating rooms. Dr. Masterson has also maintained a strong presence in undergraduate Medical education as the UBC representative to the Canadian Healthcare Education Common, integration of iClicker technology to UBC, and development of an electronic library of teaching images for the Dept. of Urological Sciences. Dr. Masterson's efforts were recognized with his receipt of the C&W Excellence in Education Award with Distinction. Dr Afshar was promoted to the position of President of Pediatric Urologists of Canada (PUC) our national subspecialty organization. Locally, Dr. Afshar has been innovative in establishing collaborative clinical research projects by linking

with the UBC Bladder care centre for the investigation of Near Infrared Spectroscopy (NIRS) for the non-invasive assessment of pediatric bladder function. He also was selected as a member of UBC/CW research ethics board. Dr. Afshar also received a UBC/Department of Urologic Sciences merit award for 2009. Dr. MacNeily completed his 5-year term as a Royal College examiner in June 2009, and remains as Postgraduate Educational director for the Department of Urological sciences. His long-term commitment to postgraduate education was recognized with several awards in 2009: A UBC Killam teaching prize, a faculty of medicine distinguished achievement award for excellence in education, honorable Mention by the American Urological Association Residents' Committee and finalist in the 2009 Royal College Program Director of the year competition. The most significant development in the last year has been the appointment of Dr. Jennifer Mickelson to the Division in October 2009. Dr. Mickelson is a graduate of the UBC Urology Residency program and returns to us after a 2 year fellowship in Pediatric Urology at Northwestern University, Chicago Illinois. She is currently completing a Master's Degree in Health Professions Education which will be a great asset to our Division, as well as Children's Hospital in general. Academic productivity was excellent with a total of 14 presentations, 20 publications, and 12 new or ongoing grants. Academic excellence by Drs. MacNeily and Afshar was recognized with achievement of the first prize in clinical research at the Dept of Urologic Sciences Research Day for their work on non-narcotic analgesia in the treatment of renal colic.

The Division of Pediatric Urology continues to play a major educational role within both the UBC Department of Urologic Sciences and the Department of Pediatric Surgery at the undergraduate and postgraduate levels. At all times, 2 residents from our residency training program are on rotation at BCCH participating in ambulatory clinics, surgery, urodynamic assessments, ward and emergency consultations as well as a variety of scheduled academic sessions. In 2009-10 we hosted 18 elective medical students from across Canada, as well as a large contingent of UBC final year students. Dr. Victor Figueroa, a Urologist from Colombia

continued on as a clinical Fellow. We will be wishing him well when he graduates in June 2010, with plans to pursue further training in Pediatric Urology at the Hospital for Sick Children in Toronto.

PRESENTATIONS

Dr. MacNeily

1. "The Surgical Personality: comparisons between urologists, nonurologists and nonsurgeons". Canadian Urological Association, Toronto, Ontario. June 2009
2. "Trends in Open and Minimally Invasive Surgical Exposure in Canadian Residency Training Programs". Western Urologic Forum, Phoenix, Arizona, USA. March 2010

Dr. Afshar

3. "Prognostic Factors in resolution of antenatally diagnosed hydronephrosis: a multivariable analysis". Canadian Urological Association, Toronto, Ontario. June 2009
4. "Nonnarcotic analgesia in the treatment of renal colic: a systematic review of the literature and meta-analysis". Canadian Urological Association, Toronto, Ontario. June 2009
5. "Near infrared spectroscopy in diagnosis of pediatric voiding dysfunction". American Academy of Pediatric (section on Urology), Annual meeting. Washington DC USA. Oct 2009

Dr. Mickelson

6. "Computer Enhanced Visual Learning (CEVL) Method to train urology residents in pediatric orchiopexy provides consistent learning experience in a multi-institutional clinical trial". American Academy of Pediatrics Section on Urology. Washington, DC. Oct 2009

LECTURES:

Dr. MacNeily

1. "What have we learned from the Canadian Resident Matching Service in Urology?" Presented to the Canadian Academy of Urological Surgeons. Toronto Ontario. June 2009.
2. "Surgical Reconstruction for Disorders of sexual Differentiation". OPSEI Rounds. BC Children's Hospital. Feb 2010

Dr. Afshar

3. "Management of Acute Scrotum in Children". Pediatric Emergency Updates. BC Children's Hospital. April 2009

Dr. Mickelson

4. "Computer Enhanced Visualized Learning (CEVL): a practical innovation to teach surgery" 2009 American Urologic Association meeting. Chicago IL – Society for Urology Chairpersons and Program Directors
5. "Residency training in neonatal circumcision: a needs assessment and pilot study" 2009 American Academy of Pediatrics meeting. Washington DC. – Section on Pediatric Urology – podium presentation – Clinical Prize finalist
6. "Computer Enhanced Visualized Learning (CEVL) method to train residents in pediatric orchiopexy provides consistent learning experience in multi-institutional trial". American Academy of Pediatrics meeting Washington, DC – Section of Pediatric Urology – poster presentation. Oct 2009
7. "The Future of Neurogenic Bladder Management: The Xiao Procedure" British Columbia Urologic Society Presentation, Vancouver BC. November 2009

FORMAL TEACHING

Dr. MacNeily

1. INDE 410 Male genital exam lecture to UBC students
2. Phase IV surgery oral examinations
3. Dept of Urological Sciences annual Postgraduate OSCE examination

4. Visiting Professor: Department of Urology NorthWestern University, Chicago Illinois USA June 17-18, 2009. Presentation: "Things I learned while talking to myself: Reflections on 15 years as a Urology Residency Director" & " Lower Urinary Tract Reconstruction in Children: A lesson in Humility" & Two Resident teaching sessions, 1 hour each.

Dr. Afshar

5. INDE 410 Male genital exam lecture to UBC students
6. Phase IV surgery oral examinations
7. FERGU lecture: Congenital Anomalies of The Urinary Tract: Clinical Correlations
8. Principles of surgery lectures: 4 lectures on Principles of Evidence Based Surgery

PUBLICATIONS APR 1, 2009 TO MAR 31, 2010

1. **Mickelson JJ**, Kaplan WE, **MacNeily AE**. Active Learning: A Resident's reflection on the impact of a student-centered curriculum. CUA Journal Oct 2009 Vol 3, Issue 5399-402
2. **MacNeily AE**, Jafari S, Scott H, Dalgetty A, **Afshar K**. Health Related Quality of Life in Spina Bifida: A prospective assessment before and after Lower Urinary Tract Reconstruction. J Urology 2009 October;182 1984-1992
3. **Afshar K**, Seth A, Jafari S, **MacNeily AE**. Publications by the American Academy of Pediatrics Section on Urology: The Quality of Research Design and Statistical Methodology. J Urology 2009 October; 182 1906-1910.
4. Hennessey K, **Afshar K**, **MacNeily AE**. The top 100 cited articles in Urology CUA Journal August 2009 Vol 3, No(4) 293-302
5. Afshar K, Jafari S, Mirbagheri A, MacNeily AE. Development of a symptom score for dysfunctional elimination syndrome. J Urology 2009 October; 182 1939-1944.
6. Aronson KJ, Wilson JWL, Hamel M, Diarsvitri W, Fan W, Woolcott C, Heaton JPW, Nickel JC, **MacNeily AE**, Morales A. Plasma organochlorine levels and prostate cancer risk. J Exposure Science and Environmental Epidemiology. June 2009.

7. **MacNeily AE.** Comparing outcomes of slings with versus without enterocystoplasty for neurogenic urinary incontinence. *Journal of Urology*. 181, 2716, 2009.
8. **MacNeily AE.** The training of Canadian Urology Residents: Whither open surgery? *CUA Journal* 2010; 4(1) 47-8.
9. **MacNeily AE.** The teaching of critical appraisal skills in urology residency: What is the Evidence? *CUA Journal*; 2010; 4(2):121-2.
10. Alfadhel M, Pugash D, Robinson AJ, Murphy JJ, Senger C, **Afshar K**, Armstrong L. Pre- and postnatal findings in a boy with duplication of the bladder and intestine: report and review. *Am J Med Genet A*. 2009 Dec;149 A(12):2795-802.
11. Jafari S, Etminan M, **Afshar K**. Nonsteroidal anti-inflammatory drugs and prostate cancer: a systematic review of the literature and meta-analysis. *Can Urol Assoc J*. 2009 Aug; 3(4):323-330.
12. Shadgan B, **Afshar K**, Stothers L, Macnab A: Near-infrared spectroscopy of the bladder: a new technique for studying lower urinary tract function in health and disease *Proc. of SPIE* Vol. 7548 75480U-1
13. Kim D, **Mickelson J**, Helfand B, Maizels M, Kaplan W, Yerkes E. Fetal pyelectasis and a predictor of decreased renal function. *Journal of Urology*, 182 (4) supp 1: 1849-1853, Oct 2009.
14. **Mickelson J**, Yerkes E, Zebold K, Meyer T, Kropp B, Cheng E. Management of stomal stenosis: the impact of the use of the L-stent. *Journal of Urology*, 182 (4) supp 1: 1786-1791, Oct 2009.
15. Maizels M, **Mickelson J**, Yerkes E, Maizels E, Stork R, Young C, Corcoran J, Holl , Kaplan W. Computer enhanced visual learning (CEVL) method: A paradigm to teach and document surgical skills. *Journal of Graduate Medical Education*. 109-113, Sept 2009.
16. **Mickelson J**, Yerkes Cheng E, Yerkes E. Urologic issues of the pediatric spina bifida patient: a review of the genitourinary concerns and urologic care during childhood and adolescence. *Journal of Pediatric Rehabilitation Medicine*, 2, 51-59, Jan 2009.
17. Pak T, **Mickelson J**, Yerkes E, Suresh S. Transverse abdominis plane block: a new approach to the management of secondary analgesia following major abdominal surgery. *Paediatr Anaesth*. 19 (1): 54-56, Jan 2009.
18. Wallis CJ, **Masterson JST**. The value of anatomic visualization

provided by magnetic resonance imaging in surgical planning for cases of aberrant anatomy. *J of Investigative Medicine*. Vol 58 Num 1, January 2010.

19. Gilley MJ, Wise S, **Masterson JST**. University of British Columbia online PBL cases hosted on Diagnosis X: the students' perspective. *J of Investigative Medicine*. Vol 58 Num 1, January 2010.
20. Wise S, Gilley MJ, **Masterson JST**, **Afshar K**. Iclicker trial study at the University of British Columbia medical school. *J of Investigative Medicine*. Vol 58 Num 1, January 2010.

HONOURS AND AWARDS

| Recipient | Name of Award | Date Received |
|---------------|--|---------------|
| MacNeily AE | Honorable Mention: American Urological Association Residents Committee Teaching Award | 2009 |
| MacNeily AE | University of British Columbia Killam Teaching Prize | 2009 |
| Masterson JST | Excellence in Education Award with Distinction – BCCH | 2010 |
| Mickelson JJ | Poster of Distinction - Northwestern University Clinical and Translations Sciences (NUCATS) – Clinical Research Education Conference | 2009 |
| Mickelson JJ | Clinical Research Award– 2009 American Academy of Pediatrics meeting | 2009 |

SUCCESSFUL GRANT FUNDING

| Project Title | PI | Team | Granting Agency | Amount |
|--|----------------------------|---|--|----------------------------------|
| Randomized Controlled trial of section of filum terminale with the conus in normal position | Steinbok P, MacNeily AE | | BC Research Institute for C&W Health and Industry | \$7,500 C&W, \$6,000 Industry |
| The Surgical Personality: Does it differ by subspecialty? | MacNeily AE | Alden L, Eng M, Webber E | UBC Dept of Surgery Research Concept Award | \$5,000 |
| Does cranberry product prevent urinary tract infections in children? | Stothers L, MacNeily AE | | Lions Gate HealthCare Research Foundation Grant | \$55,500 |
| UROPEdia: The development of an internet based urology- trainee specific resource | Nguan C | Izawa J, MacNeily AE | UBC Urology Research Education and Development Foundation Award | \$10,000 |
| A prospective trial on the use of biofeedback in the management of Pediatric Dysfunctional Voiding | Afshar K, MacNeily AE | | UBC Urology Research Education and Development Foundation Award | \$10,000 |
| Review of the introduction of iClicker technology into weeks 1-5 wrap up lectures in the 2009 FERGU block | Masterson J, Afshar K | | Faculty of Medicine grant | \$4,900 |
| Wrap-up and editing of online teaching resources project in urology | Masterson J | Goldenburg SL, Leone E, Nguan C, Afshar K, Peterson L, Flieszer D, Posel N | UBC Teaching and Learning Enhancement Fund | \$27,950 |
| Lights, Camera, Surgery: Production of Surgical Education Videos within the OR Setting | Blair G | Masterson J, Duffy D | UBC Teaching and Learning Enhancement Fund | \$14,850 |
| Impact of Surgical cancellations on families | Afshar K | Jafari S, Duffy D | CYHRnet Seed grant | \$4850 |
| | Afshar K | Jafari S, Duffy D | CYHRNet Health Economics Workshop travel grant | \$500 |
| Feasibility study on the use of near infra red spectroscopy in pediatric voiding dysfunction | Afshar K | | CFRI Grant | \$9800 |
| | Afshar K | Hamidzadeh A | UBC summer student grant | \$3400 |

| | |
|----------------------|---|
| Fellows Supervised | Dr Victor Figueroa |
| Residents Supervised | 2 residents supervised at all times throughout the year |
| Students | Year 4 – 12 students supervised |

COMMITTEE PARTICIPATION

Dr. MacNeily

1. Chief negotiator Pediatric Surgical CASC BC Children's Hospital
2. Surgical Services Advisory Committee BCCH
3. Divisional Representative - Surgical Cabinet BCCH
4. UBC Dept of Urological Sciences representative - Toronto Urology Fair
5. Chair - UBC Dept of Urologic Sciences Residency training committee
6. Member UBC Dept of Surgery Residency Affairs Committee
7. Member UBC Postgraduate Executive Committee (FREC)
8. Manuscript Reviewer: Journal of Urology, Pediatrics, Urology
9. Grant Reviewer Physicians Services Incorporated 2009
10. Urology Template manager T-Res National Resident Case-log database
11. External reviewer: textbook on GU manifestations of CHARGE syndrome
12. 2007 – 2010, Section Editor (Pediatric Urology) Canadian Urological Association Journal
13. 2006-2008, President Pediatric Urologists of Canada
14. 2008-2010, Past-President Pediatric Urologists of Canada
15. 1995-2010, Member Canadian Urological Association Residency Affairs Committee
16. 2006-2010, Member Dept of Urologic Sciences Promotion and

Tenure Committee

17. 2006-2010, Nucleus member UBC Dept of Urologic Sciences Advisory council
18. 2006-2010, Vice chair UBC Department of Urologic Sciences
19. 2006-present, Member Dept of Urologic Sciences Educational Committee
20. 2007-present, Member Dept of Urologic Sciences Merit & PSA Committee
21. 2004-2009, Nucleus member Urology test committee Royal College of Physicians and Surgeons of Canada
22. 2009, Co-Chair Scientific Committee Dept of Urologic sciences Resident Research day

Dr. Afshar

23. 2006-present, Member of Research Committee, Department of Urological Sciences, UBC
24. 2006-present, Director Residency Research Program: Department of Urological Sciences, UBC
25. 2009-present, Member of Residency Training Committee: Department of Urological Sciences
26. 2009-present, Member UBC/CW Research Ethics Board
27. Ad Hoc Reviewer Journal of Urology
28. Ad Hoc Reviewer Canadian Urological Association Journal
29. Ad Hoc Reviewer Urology
30. Member Scientific Committee of Canadian Urological Association Scholarship Foundation
31. 2007-present, Member Antimicrobial Review Committee, BC Children's Hospital
32. 2004-present, Clinical Record Committee, BC Children's Hospital
33. 2004-present, Director of Research Division of Pediatric Urology, BC Children's Hospital
34. 2007-2009, Secretary Treasurer Pediatric Urologists of Canada

Dr. Masterson

- 35. Physician Member-BC Children's Hospital "Circle of Care" \$10,000 Foundation Donor
- 36. Member, Pediatric Surgical Executive Committee, BCCH
- 37. Member, Surgical Data Management Committee BCCH
- 38. Member, BCCH Surgical Cabinet Committee
- 39. Alternate Member, UBC Dept Urological Sciences, UBC Undergraduate Curriculum Committee
- 40. Surgical Services Advisory Committee, BCCH

Dr. Mickelson

- 41. 2009-present, UBC Year 4 Undergraduate Committee
- 42. 2009-present, UBC Year 3 Undergraduate Committee
- 43. 2010-present, UBC Undergraduate Surgical Education Committee
- 44. 2010-present, UBC Department of Urologic Sciences
- 45. 2009-present, UBC Department of Urologic Sciences Education Committee





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