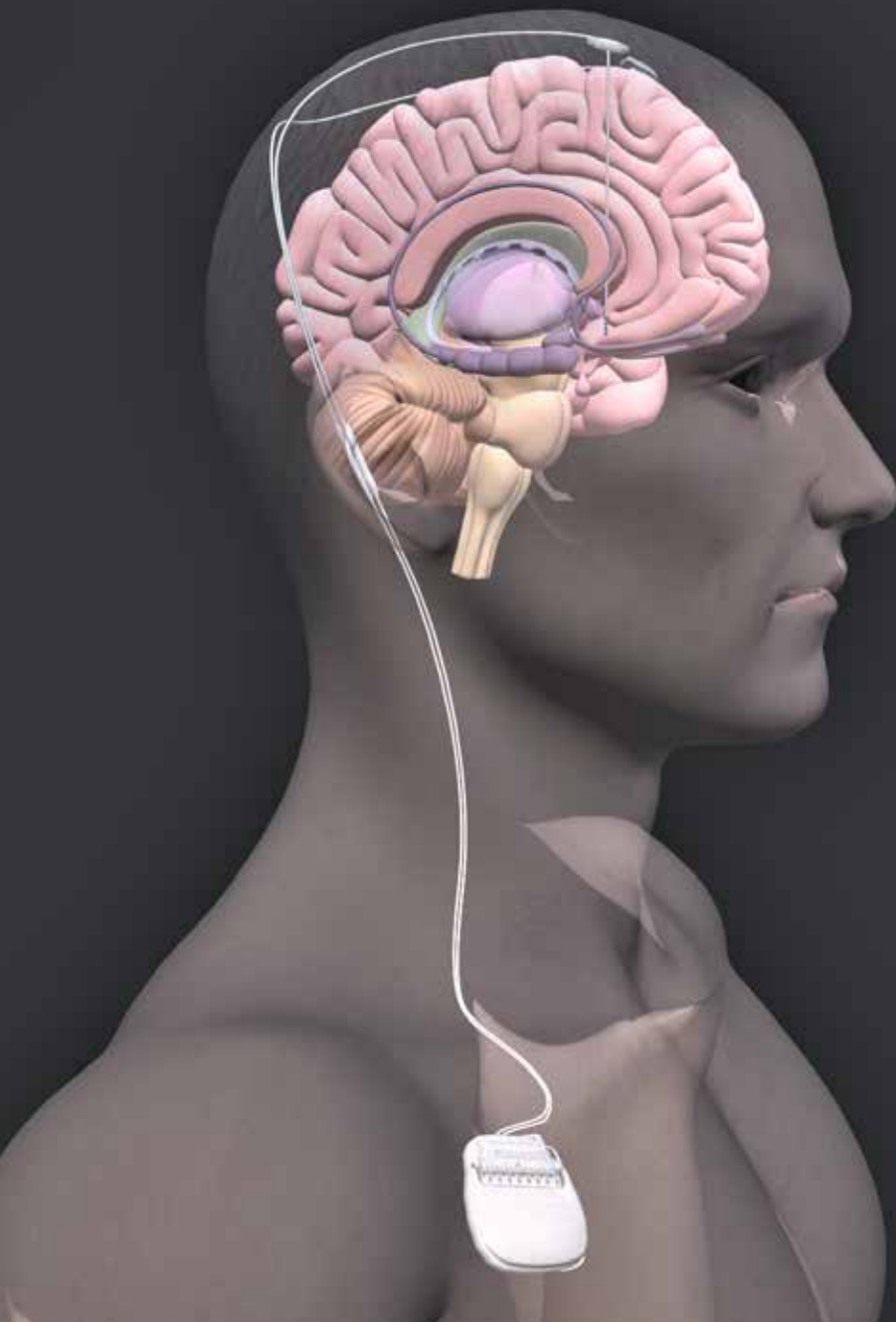


OPEN SKIES

Department of Surgery Newsletter

Vol.6 No.2

June 2019



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UNIVERSITY OF
SASKATCHEWAN



Saskatchewan
Health Authority

CHAIRMAN'S MESSAGE



"The energy and commitment to excellence of our new surgeons make the future of surgery in Saskatchewan very bright."

Building surgical capacity in Saskatchewan has been a priority for the Department of Surgery. Over the past 6 years, 79 new surgeons have been recruited to the Department covering all surgical specialties. This represents a 60% increase in new faculty, making our Department one of the fastest growing surgical departments in Canada.

We have focused in strengthening and expanding critical surgical services and filled the gaps in areas that were under served. We have also paid particular attention in recruiting academic surgeons to enhance our research and education mission.

This new generation of surgeons have had a significant impact in the culture of the Department. They have brought to Saskatchewan their clinical expertise and a commitment to the academic pathway. Together, we have created a fertile environment that encourages our faculty to develop their personal and professional aspirations to their full potential.

Increasing our surgical capacity has allowed us to provide surgical care for most surgical conditions to the population in Saskatchewan. Out-of-Province referrals have decreased dramatically in the past 5 years and the people of Saskatchewan have their surgeries in their home Province.

All our recruits are Royal College of Canada certified and come from all regions of the country. Their diverse backgrounds, training and collegiality have enriched the Department and the Province. Their energy and commitment to excellence make the future of Surgery in Saskatchewan very bright indeed.

Sincerely,

Ivar Mendez, MD, PhD, FRCSC, FACS, FCAHS
F.H. Wigmore Professor of Surgery
Saskatchewan Provincial Head of Surgery

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It is distributed to all surgical faculty, residents and collaborators of the Department of Surgery, as well as surgical teaching centres in Canada and abroad.

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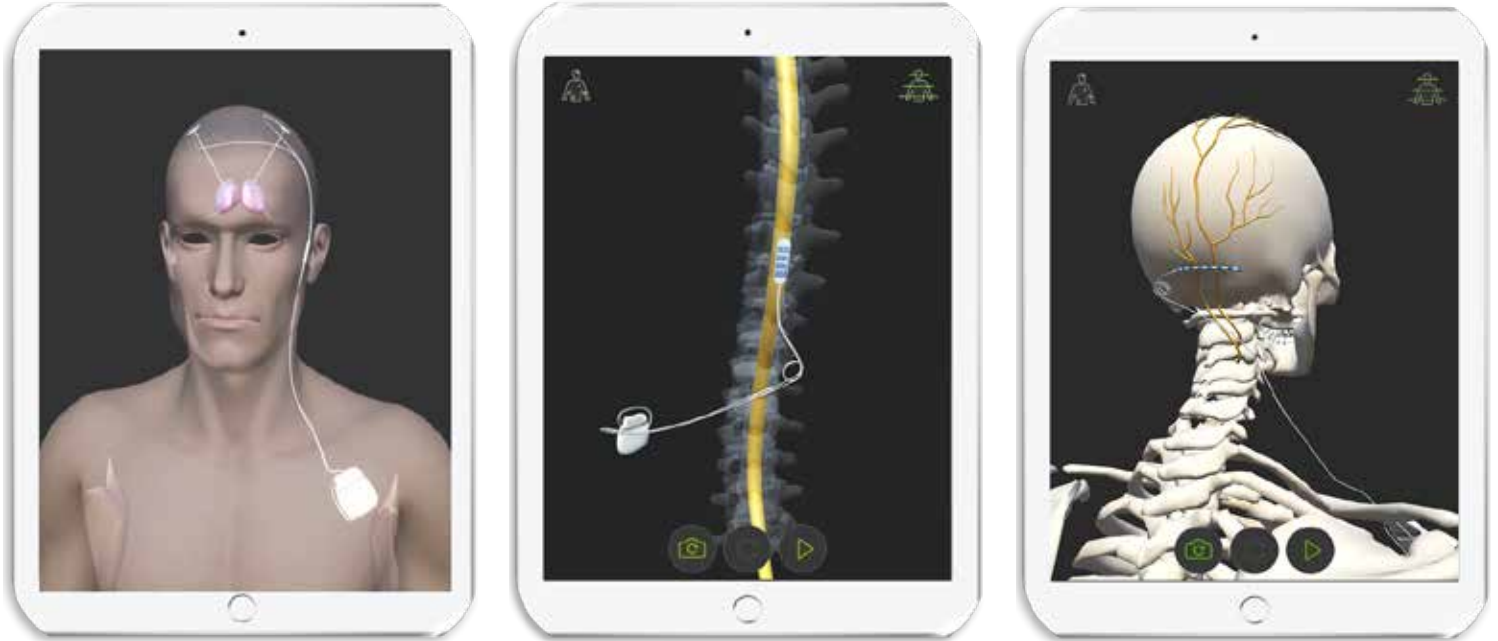
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SPATIENT: AVATAR FOR PATIENT TEACHING

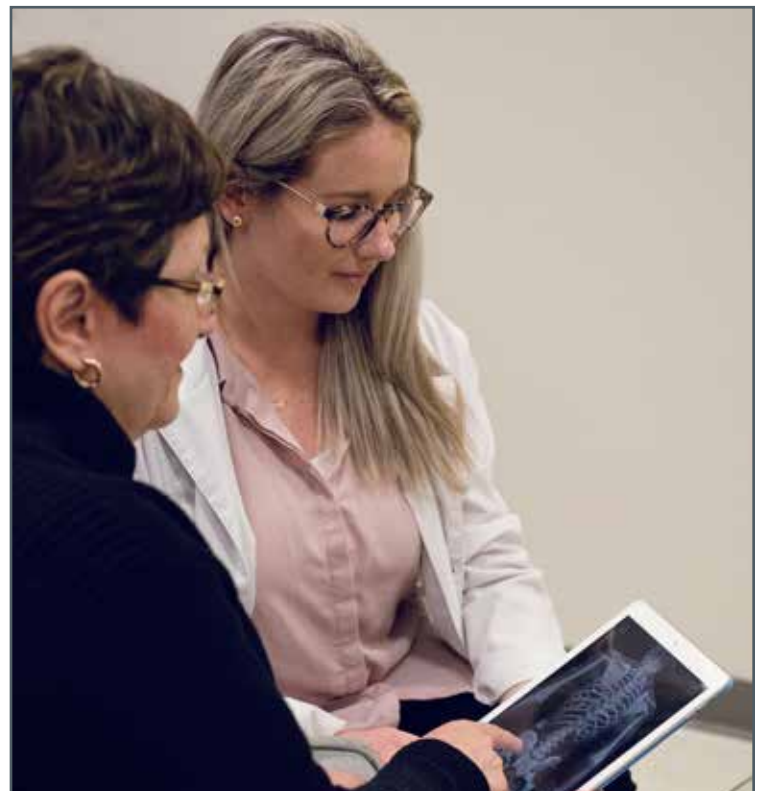


The **SPatient**[™] is an interactive App designed to teach patients about their upcoming surgical procedures. The App was developed by the Department of Surgery in collaboration with Siili Solutions, a digital design company in Finland. This innovative App contains a high-resolution digital avatar that allows full patient interaction. The patient can manipulate digital simulation graphics to show the surgical procedure and the relevant anatomy. The App is highly intuitive, and animations further facilitate the understanding of the surgery.

The **SPatient**[™] has been first used in Neurosurgery and specifically in neuromodulation procedures such as Deep Brain Stimulation (DBS) and Spinal Cord Stimulation (SCS). The targets of the stimulation electrodes, the trajectory of the electrodes and connection with the pulse generators are well depicted in the digital avatar and easily understood by patients.

A randomized controlled study of patients using the app vs patients where the procedure was explained verbally and with the aid of drawings was conducted. This study showed a higher degree of understanding of the surgery and significant decrease in levels of preoperative anxiety in patients using the App.

This initial experience with the **SPatient**[™] as a preoperative teaching tool has been encouraging and we plan to extend its applications to other surgical procedures.



Neuromodulation Nurse teaching patient using the **SPatient**[™] App

2019 RESIDENT RESEARCH DAY



Dr. Cian O'Kelly, Keynote Speaker

The Department of Surgery Resident Research Day occurred on May 16, 2019 in the Asher Auditorium at Saskatoon City Hospital. Over 100 faculty, residents, and staff were in attendance.

The judges for this event were Dr. Cian O'Kelly, Associate Professor of Surgery and Site Lead in the Division of Neurosurgery at the University of Alberta; Dr. Marek Radomski, Vice Dean Research in the College of Medicine at the University of Saskatchewan; Dr. Darrell Mousseau, Professor in the Department of Psychiatry at the University of Saskatchewan; Dr. Silvana Papagerakis, Associate Professor in the Department of Surgery at the University of Saskatchewan; Dr. Gary Groot, Professor in the Department of Surgery at the University of Saskatchewan; and Dr. Daryl Fourney, Professor of Surgery and Director of Research for the Division of Neurosurgery in the Department of Surgery at the University of Saskatchewan. Fourteen papers were presented through the day.

The Keynote Speaker was Dr. Cian O'Kelly, Associate Professor of Surgery and Site Lead for the Division of Neurosurgery at the University of Alberta, the title of his talk was **"Transitioning to Competency Based on Medical Education: Neurosurgery's Journey"**.

The Resident Research Day Awards Banquet followed in the evening at the Sheraton Cavalier Top of the Inn. Awards were presented by Dr. Ivar Mendez, Professor and Provincial Head of Surgery, Dr. Brian Ulmer, Surgical Lead for Saskatoon Area and Dr. Francisco S. Cayabyab, Director of Research in the Department of Surgery. Julia Newton received the **Dash Reed Research Award** for her presentation on "Assessing the Risk of Gadolinium-Based Contrasts Agents in Post-Stroke Brain Tissue"; Emily Chan received the **Surgical Foundations Research Award** for her presentation on "Epidemiological Trends of Meniscectomy in Saskatchewan"; Paul Kulyk received the **First Place Award for Podium Presentation** for his presentation on "Fully Automatic Planning of Total Shoulder Arthroplasty: A Deep Learning Based Approach"; Sarah McLaren received the **Second Place Award for Podium Presentation** for her presentation on "The Effect of Patient Resilience and Pain



Resident Research Day Banquet, Sheraton Top of the Inn



Dr. Paul Kulyk, First Place Podium Presentation



Dr. Amit Persad, Third Place Podium Presentation



Dr. Uzair Ahmed, Resident Research Publication Award & Vice Dean's Prize



Research Day Program

Catastrophizing on Outcomes Following Carpal Tunnel Release"; Amit Persad received the **Third Place Award for Podium Presentation** for his presentation on "The "7/20 EMG Protocol" in Combination with O-Arm IMaging for Accurate Lumbar Pedicle Placement While Minimizing Diagnostic Radiation"; Uzair Ahmed received the **Resident Research Publication Award** for his presentation on Multi-modal Imaging Analysis to Evaluate Hyperoxygenation Therapy for Acute Cerebral Ischemia"; Uzair Ahmed was also recognized for receiving the **Vice-Dean's Prize for Resident Research in Surgery** from the College of Medicine.

The 2019 Department of Surgery Resident Research Day gave testimony to all the excellent research that is happening in the Department of Surgery and the College of Medicine at the University of Saskatchewan.

NEW FACULTY IN SURGERY



Dr. Jennifer Culig, Vascular Surgery



Dr. Stephen Gowing, Thoracic Surgery



Dr. Suzie Harriman, General Surgery

Dr. Jennifer Culig received her Bachelor of Science in Biology from the University of Regina. She studied Pharmacy and completed Medicine at the University of Saskatchewan. During medical school she was passionate about interdisciplinary patient care awarding her the Drs Epstein and Schnurr prize for Integrative Medicine. She completed her postgraduate Residency training in Vascular Surgery at the University of British Columbia.

She also studied in Bogota, Colombia under Dr. Alberto Munoz, President of the World Federation of Vascular Societies. From her experience in Latin America she was able to present both nationally and internationally at numerous vascular meetings on Carotid Body Tumor Management in Colombia and Globalization in Vascular Surgery.

Dr. Culig is happy to return to Saskatchewan joining the Division of Vascular Surgery and looks forward to her education role as Assistant Professor with the University of Saskatchewan. She is passionate about education and dedicated to encouraging and inspiring women to achieve their surgical career ambitions. While in Saskatchewan she hopes to continue her research with the Synchrotron Canadian Light Source and its assessment of Vascular Pathology.

Stephen Gowing MDCM, PhD has been appointed to the division of Thoracic Surgery at the University of Saskatchewan. He grew up in the small town of Lindsay Ontario before studying at McGill University in Montreal for a BSc Honours degree in Microbiology and Immunology, followed by medical school and General Surgery residency. During General Surgery training he enrolled in PhD studies as part of the surgeon scientist and clinical investigator programs. His thesis work under the supervision of Thoracic Surgeon Dr. Lorenzo Ferri focused on how post-operative infectious complications induce metastasis following curative intent resection of thoracic malignancies. He subsequently completed his Thoracic Surgery training at the University of Ottawa. His clinical interests include advanced endoscopy, foregut malignancy and minimally invasive thoracic surgery. He is married and has a wonderful baby daughter.

Dr. Suzie Harriman attended medical school and completed her general surgery residency at the University of Saskatchewan. She was the first fellow to complete the Acute Care Surgery Fellowship at University of Saskatchewan with an interest in Trauma. With the help of the Royal University Hospital Foundation she got additional trauma exposure during her fellowship at a high-volume trauma center in Chicago, IL. She was hired by the department of General Surgery to play a role in the development of the trauma program alongside the Trauma Director, Dr. Niroshan Sothilingam. Dr. Harriman has a goal to expand the trauma simulation program to an in-situ simulation program which will enhance education and trauma care within the province. She plays an active educational role in both the Trauma Program and the Acute Care Surgery program at both Royal University Hospital and St Paul's Hospital.

ORTHOPEDIC RESEARCH



Dr. Paul Mick, Otolaryngology

Dr. Paul Mick attended medical school at the University of Alberta and residency at the University of British Columbia. He completed a neurotology/skull base surgery fellowship at the University of Toronto and a Masters' degree in public health with sub-specialization in quantitative methods at Harvard. Dr. Mick was recruited to lead the Saskatchewan cochlear implant and neurotology programs. He will perform lateral skull base surgery with his neurosurgeon colleague Luke Hnenny. He is the recipient of numerous large research grants awarded by the CIHR and other organizations. His research focuses on reducing the risk of sensory loss and its negative consequences. He is a researcher within the CIHR-funded Canadian Consortium on Neurodegeneration in Aging (ccna-ccnv.ca), which is a key component of the national strategy for addressing age-related neurodegenerative diseases. Dr. Mick is also a member of the clinical working group of the Canadian Longitudinal Study on Aging (clsa-elcv.ca).



Dr. Jason Shin, Orthopedic Surgeon (Moose Jaw, Saskatchewan)

In today's climate of Choosing Wisely initiatives and evidence-based medicine, there is an increasing emphasis on delivering high value healthcare (i.e. improving quality while lowering costs). Accordingly, there are numerous widespread campaigns aimed at decreasing unnecessary medical investigations and treatments

As surgeons, overprescribing treatment can present in the form of surgeries, such as thyroidectomy, cholecystectomy, hernia repair, prostatectomy, tympanostomy tubes, cardiac stenting, carotid endarterectomy etcetera... While in the appropriate clinical setting, these are important and at times critical procedures with little to no alternatives, the frequency to which these procedures are being indicated is becoming increasingly questioned.

Bob Jackson MD FRCSC first introduced the technique of arthroscopy to North America in 1965. Since then, there has been tremendous interest and widespread utilization of the arthroscope in orthopedic surgery. While arthroscopic surgery has revolutionized our ability to manage orthopedic conditions, several recent high-quality randomized control studies have challenged the efficacy of arthroscopic meniscectomy, particularly in the arthritic knee.

Dr. Emily Chan (PGY1), Cohen Chaulk (Medical Student) and Dr. Jason Shin (principal investigator) are currently analyzing trends in arthroscopic meniscectomies in Saskatchewan over the previous 20 years. Preliminary data which was presented at the annual Department of Surgery Resident Research Day shows that there is no significant change in frequency of arthroscopic meniscectomies in this province. The team aims to identify discrepancies in practice pattern. Moreover, the results of this study will highlight whether there has been successful implementation of current evidence-based guidelines, or whether there is a need for improved dissemination of the literature among patients, clinicians and applied health professionals.

This study would not be possible without the support and collaboration of eHealth Saskatchewan.



Drs. Paul Mick, Nico Moolman, Shabir Mia & Luke Hnenny (left to right)

Skull base surgery is a subspecialty area that involves approaching and operating on difficult-to-access lesions beneath the brain. These lesions are often neoplastic in nature (pituitary adenomas, vestibular schwannomas, meningiomas, craniopharyngiomas, chordomas, chondrosarcomas), and require multidisciplinary collaboration for optimal outcomes. Intraoperative collaboration typically involves neurosurgeons, otolaryngologists, and electrophysiologists. Perioperative care may also include endocrinologists, audiologists, ophthalmologists, and physiatrists.

The Saskatchewan Skull Base Surgery Program is a new provincial program that provides comprehensive clinical care for patients with skull base pathology. In addition to streamlining and standardizing clinical care, the program will conduct quality improvement initiatives, track outcomes, contribute to medical education, and produce novel research. Drs. Hnenny, Mick, Mia, and Moolman are the surgeons involved in the program.

Dr. Luke Hnenny is a neurosurgeon who completed residency at the University of Saskatchewan, and fellowship training in skull base surgery at the Oregon Health and Science University in Portland. He performs both microsurgical and endoscopic skull base surgery.

Dr. Paul Mick is an otolaryngologist who completed residency at the University of British Columbia, and fellowship training in neurotology/skull base surgery at Sunnybrook Hospital in Toronto. He went on to complete a Masters' degree in Public Health at Harvard and practiced in Kelowna, BC, before being recruited to Saskatoon.

Dr. Shabir Mia is an otolaryngologist who completed residency at the University of British Columbia. He has expertise in endoscopic sinus surgery, as well as expanded endonasal approaches to the skull base. He first introduced Image-guided Endoscopic Sinus Surgery to Saskatoon just over 12 years ago. He was the first ENT surgeon in Saskatchewan to perform an entirely endoscopic approach to the anterior skull base.

Dr. Nico Moolman is an Otolaryngologist - Head and Neck surgeon who completed medical school in Saskatoon and went on to residency training at Dalhousie University, Halifax. He has expertise in endoscopic sinus surgery, as well as expanded endonasal approaches to the skull base.