Surgical Simulation: A New Frontier in Education, Patient Safety and Research

Surgical education is changing rapidly, a fact that is becoming increasingly clear to practicing surgeons and trainees. The resident training model was first devised in the 19th century when Halstead was credited with developing the hospital residency as the model for training surgeons. In some ways, little has changed with most learning occurring while students practice under supervision, but it has become apparent that change is occurring quickly.

For some time, people have questioned the concept of the “see one, do one, teach one” philosophy of surgical education and skills training. Couple this with the financial and OR time constraints that come with traditional teaching methods, and surgical simulation would seem to have the potential to transform surgical education and training. Initially somewhat of a fringe endeavour, surgical simulation has become a mainstream part of surgical education.

In the surgical literature, a common mistake is to use the term ‘simulator’ interchangeably with virtual reality. Simulator is actually defined as “a device that enables the operator to reproduce or represent under test conditions phenomena likely to occur in actual performance.” Simulation has been used in several highly specialized industries for decades. Trainees in the aerospace industry spend countless hours practicing basic and advanced skills on simulators before hands-on training at the controls of an aircraft. In the military, combat pilots as well as submarine and tank crews are required to demonstrate competence in simulated environments before being charged with the operation of billions of dollars worth of equipment. Conversely, simulation is a relatively new phenomenon in the field of medicine. Delp et al. developed the first virtual reality simulator for surgical training in 1990. Their model consisted of a simulated lower extremity for teaching reconstructive tendon surgery.

Developing our leadership in surgical simulation is among my top priorities. It is also a key pillar in London Health Science Centre’s Three Year Strategic Plan. During the next five years, I will endeavour to work collaboratively with members of our department, the Faculty of Engineering, colleagues from LHSC, St. Joseph’s Health Care, London and various others from across the Western campus to lead the way in developing research into simulation and to implement new simulation technologies into our curriculum. I am pleased to report we are already off to a great start.

First off, The Ministry of Health and Long-term Care has given approval for construction of the Kelman Centre to move forward. It is anticipated to open in spring 2010, and will house a state-of-the-art surgical simulation skills lab. In December, we established the CSTAR Simulation Research Group, whose surgeons have protected time to devote to research in surgical simulator development and team-based simulation programming. In addition to this, CSTAR recently received accreditation from the American College of Surgeons as an Accredited Education Institute. We join 39 other institutes across North America and Europe, which will help foster collaboration with colleagues from different parts of the world. Additionally, members of the department have been collaborating closely with the Canadian Patient Safety Institute over the

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issue of patient safety and simulation, education and training. And finally, Dr. Michael Chu from the Division of Cardiac Surgery and Dr. Sumit Agrawal from the Department of Otolaryngology were successful in the latest round of the AMOSO Opportunities Fund, to conduct research into new patient-specific simulation technologies in Cardiovascular and Neurotology Surgery. Patient specific simulators allow surgeons to plan and practice complex procedures and have been shown to significantly improve outcomes. Each of these initiatives, along with others down the road, will help us reach our goal of creating impact through research into surgical simulation.

Incorporation of surgical simulation into education will undoubtedly be one of the most important developments in the area of surgery. Including simulators in our curriculum should translate into more efficient training and will allow consultant surgeons to upgrade their skills as technology changes.

Certainly there are some limitations and challenges to overcome, but the future is bright. Surgical simulation provides a unique opportunity for repetitive skills training in a risk-free environment that can maximize the educational experience and reduce training time. It also has the potential to shorten learning curves for difficult techniques and provides opportunities for surgeons to practice surgery without risk to patients.

Dr. Agrawal plans to establish a translational research program in Virtual Skull Base Surgery (VSBS) and strengthen the clinical Neurotology program within the Department of Otolaryngology. The VSBS Program involves creation of patient-specific computer models using non-invasive medical-imaging technologies, advanced computer-based modeling techniques and state-of-the-art human-computer interfaces. Together, these technologies allow surgeons to optimize their skills through rehearsal of complex surgical procedures on high fidelity computer models that emulate actual otolaryngology patients. In addition, these high fidelity simulation models of individual patients enable “virtual” evaluation of post-operative impact on hearing.

Both Drs. Chu and Agrawal will be collaborating with colleagues from the Department of Surgery, the Department of Otolaryngology, Department of Medical Biophysics, Department of Electrical & Computer Engineering, Robarts Research Institute, and the Department of Medical Biophysics, many of whom have an interest in the emerging field of surgical simulation. Together, they will form a critical mass of research in this multi-disciplinary area.

Drs. Michael Chu and Sumit Agrawal receive AMOSO Award to Develop Expertise in Surgical Simulation

Dr. Michael Chu, Division of Cardiac Surgery and Dr. Sumit Agrawal, Department of Otolaryngology, received an AMOSO Opportunities Fund award to support their project Patient-specific Simulation Development in Cardiovascular and Neurotology Surgery to develop world class patient-specific simulation technologies in these areas.

Patient-specific simulation is an emerging technology which allows surgeons and surgical teams the opportunity to plan and simulate complex surgical procedures. These simulation opportunities have been shown to improve surgical skill competency, surgical skill learning and procedure efficiencies, and overall patient outcomes. They have also been shown to reduce surgical error (Grantcharov, 2004, PMID: 14760660, Seymour, 2002, PMID 12368674).

Cardiovascular and neurotology surgery represent two sub-surgical specialties where both the complexity of technology and procedural care are rapidly increasing.

Surgical simulation will not replace the need for well designed, comprehensive surgical curriculum, or reduce the importance of dedicated and committed educators; rather it will enhance and complement these efforts. The integration of simulation into the surgical training curriculum will allow the trainee to acquire the basic surgical skills foundation, permitting the surgeon educator to concentrate on teaching judgment and professionalism, and strengthening the knowledge and interpretation of what is observed in the clinical setting. Simulation must be used within an effective learning environment, underscored by knowledge and professionalism.
Dr. Bill Wall Receives Canada’s Highest Honour

Transplant surgeon Dr. William Wall will receive Canada's highest civilian honour, the Order of Canada. The appointment was announced in December by Governor-General Michaëlle Jean. Dr. Wall is being recognized for his contributions to the development and advancement of liver transplantation in Canada, and for promoting awareness of the need for organ donation.

"I am deeply, deeply honoured to receive this award. What we have accomplished in liver transplantation has been a team effort from the very beginning. I am indebted to a remarkable group of colleagues who have been integral to what we have accomplished," said Dr. Wall.

Dr. Wall performed the first successful liver transplant in Canada in 1982. "I look back on those early days and every liver transplant was a very risky undertaking with very little chance of success," he said. "But what seemed impossible at the beginning became not only possible, it became routinely successful." More than 1,500 liver transplants have now been performed at University Hospital.

Dr. Wall joined the Department of Surgery in 1977 and since then has been instrumental in building the Multi-Organ Transplant Program into a national leader. More than 4,100 organ transplants have now been done at LHSC since the first kidney transplant in 1973.

Dr. Wall is particularly proud of an initiative to increase awareness about the need for organ donation. Ten years ago, the Transplant Program started a high school education program – One Life...Many Gifts – to teach students about the ongoing need for donation as well as the success of transplantation. This program is now being used in one-quarter of Ontario’s high schools, and it’s anticipated to become province-wide during the 2009/10 school year. The London region continues to have one of the highest organ donation rates in Canada – twice the provincial and national average.

Appointees to the Order of Canada will be invited to receive their insignias at a ceremony to be held at a later date. The Order of Canada was established in 1967 to recognize outstanding achievement and service contributions to Canadian society.

Dr. Stephen Pautler receives SJHC MAC Award

Congratulations to Dr. Stephen Pautler for receiving The Medical Advisory Committee (MAC ) Award for Outstanding Contribution to St. Joseph’s Health Care, London.

The SJHC MAC Award goes to a Professional Staff member who has demonstrated qualities of leadership and provided outstanding contribution to the success of initiatives aligning with the strategic direction of St. Joseph’s Health Care, London.

At the awards ceremony Dr. Pautler was described as “showing tremendous leadership in the use of surgical robotics in the treatment of prostate cancer, since performing the first robotically-assisted prostatectomy in Canada at St. Joseph’s on April 7, 2005. His success in using the da Vinci robot has now inspired confidence in its application to other clinical services.”

Dr. Pautler was also described as a committed caregiver and healthcare colleague, who demonstrates the value of St. Joseph’s on a daily basis.

“Dr. Pautler is a team player and a model for how young clinicians should balance their demanding clinical and academic responsibilities without losing sight of the big picture.”

Photo: Dr Stephen Pautler poses with his MAC Award
Dr. Robert McMurtry to Receive James H. Graham Award from the Royal College of Physicians and Surgeons of Canada

Orthopaedic surgeon Dr. Robert McMurtry will be awarded the James H. Graham Award from the Royal College of Physicians and Surgeons of Canada recognizing his significant career achievements.

Dr. McMurtry has had a very distinguished career as an orthopaedic surgeon and health policy advisor. Currently he is a Professor Emeritus and active contributor to the Division of Orthopaedic Surgery at the Hand and Upper Limb Centre, specializing in upper extremity, wrist and hand surgery, determinants of health, DRUJ kinematics, and scaphoid healing.

In October of 2003, he was appointed to the Transition Advisory Board of the incoming Provincial Government of Ontario. In December 2003, he was appointed to the Health Council of Canada. He chaired the Wait Times and Accessibility Work Group from January 2004 to January 2006 and he maintains an active membership in the Canadian Index of Wellbeing Project Management Team, as well as the Alberta Bone and Joint Health Institute.

Dr. McMurtry is the founding Assistant Deputy Minister of the Population and Public Health Branch of Health Canada. He was appointed to the Romanow Commission in 2002 as a Special Advisor to Commissioner Romanow. He was also Special Advisor to the Deputy Minister of Nunavut from December 2002 to August 2003 for the purpose of reviewing the Health Care System of the territory. In June of 2003, he received the Presidential Award of Excellence from the Canadian Orthopaedic Association.

In 1987, he was appointed Professor and Chair of Surgery at the University of Calgary and Chief of Surgery at Foothills Hospital. In 1992, he became Dean of Medicine at the University of Western Ontario and subsequently Dean of Medicine and Dentistry, a post he held until 1999. In 1999, he became the first Cameron Visiting Chair at Health Canada – a post carrying the responsibility for providing policy advice to the Deputy Minister and Minister of Health for Canada.

During his residency in Orthopaedic Surgery, he spent 2 years in Africa, first in a mission hospital in South Africa and then with the Canadian International Development Agency in Uganda. Following his residency, Dr. McMurtry did a fellowship in Hand Surgery at the University of Iowa. He started his practice at the former Sunnybrook Hospital (now Sunnybrook Health Sciences Centre) in 1975. It was there that Dr. McMurtry founded and directed Canada’s First Trauma Unit and the multi-disciplinary Hand Unit.

The Council of The Royal College of Physicians and Surgeons of Canada created the award in 1987 to honour a person whose outstanding achievements reflect the aims and objectives of the Royal College.

The Ministry of Health and Long-term Care (MOHLTC) has given approval for construction of the Kelman Centre

The Ministry of Health and Long-term Care (MOHLTC) has given approval for several construction projects to move forward. The projects include the remaining floors of the Lindros Legacy Research building at University Hospital, including the Matthew Mailing Centre for Translational Transplant Studies, the Brent & Marilyn Kelman Centre for Advanced Learning, and the Dr. Sandy Kirkley Musculoskeletal Research Centre; and the Gerald C. Baines Centre for Translational Cancer Research at Victoria Hospital.

The potential start dates will be confirmed following tender close, but it is expected that construction will start within six to eight weeks of awarding the contract, assuming construction prices are within budget and funding.
Lung cancer is the most common type of cancer in the world, and the most common cause of death from cancer. Although the surgical removal of the cancer is a primary course of treatment, surgery is not an option for many patients with lung cancer.

Alternatively, ablative therapy or brachytherapy (e.g. radiation) is another course of treatment available. Interstitial brachytherapy is the implantation of tiny low-dose radioactive seeds into the cancerous tissue, currently via a long hollow needle. The advantage of this method is that it decreases exposure to healthy tissue. Unfortunately, any small diversion of the needle can lead to areas of considerable over or under dosage in the patient, and this method can also expose the health-care team to hazardous radiation.

Research led by Dr. Richard Malthaner, from the Division of Thoracic Surgery and Dr. Rajni Patel, from the Faculty of Engineering is looking at ways to develop a system that allows ablation to be performed on cancerous tumours in solid organs by incorporating minimally-invasive robotic assistance (MIRA), image guidance and intra-operative navigation.

Through small incisions on the patient’s body, and using robotic arms, electromagnetic navigation and real-time ultrasound imaging, the system can enable very accurate placement of the brachytherapy seeds while reducing exposure to radiation and discomfort for the clinician by improving dexterity and ergonomics. The use of the robot allows the surgeon access to deeper tumours, and also allows for greater safety for the patient as the surgeon has immediate access to injuries occurring during the procedure.

The main outcomes of this work will lead to better cancer therapies by providing a safer and more effective treatment option for lung cancer patients who are not candidates for traditional curative therapies, and will allow more accurate and precise seed placement. It will also enable the health-care team to implant radioactive seeds at a safe distance from the radioactive source.

Dr. Ken Harris appointed Education Director for Royal College

Vascular Surgeon Dr. Ken Harris has left the department to take on the role of Director of Education for the Royal College of Physicians and Surgeons of Canada. Dr. Harris’s appointment at the College began formally in April.

Born and raised in London, Dr. Harris graduated with his MD from Queen’s and then came to Western for his residency in General Surgery. He followed this with training in Vascular Surgery at the University of Toronto. He has had an active practice in this specialty in the London hospitals since 1984.

Dr. Harris has held a number of leadership positions throughout the Schulich School of Medicine & Dentistry. Previous appointments include Program Director of General Surgery; Richard Ivey Professor and Chair, Department of Surgery; Associate Dean for Postgraduate Medical Education; Director of the Southwestern Ontario Medical Education Network (SWOMEN); and Director, Educational Research and Resources Unit.

Within the Royal College, Dr. Harris has served on various committees and participated as a surveyor and as chair in Royal College Accreditation surveys. He currently chairs the Council of Ontario Faculties of Medicine (COFM) Postgraduate Deans Committee.

In an announcement from the College, Dr. Andrew Padmos, Chief Executive Officer, said “Dr. Harris is deeply committed to health care education, particularly in the postgraduate realm, and health care delivery for both patients and health care workers.”

Dr. Tom Forbes, Chair/Chief of Vascular Surgery says the Division will miss Dr. Harris, but they are pleased to see him taking on a key leadership role in the world of medical education.

“Ken’s experience in medical education at Schulich positions him as a perfect fit for his new role,” says Forbes.

“He is committed to delivering the very best education, and he will be a tremendous asset to the College.”

Dr. Ken Harris
Dr. Roberto Hernandez-Alejandro joins the Multi-Organ Transplant Team

The Division of General Surgery is pleased to welcome Dr. Roberto Hernandez-Alejandro, who joined the group in January. With expertise in liver transplantation, Dr. Hernandez-Alejandro will strengthen the general surgical, hepatobiliary, and pancreatic group and will bring new expertise in the field of living related transplantation to the multi-organ transplant team.

Dr. Hernandez-Alejandro attended Medical School in Mexico City at the Mexican Institute of Social Security XXI Century. He completed a Fellowship in transplant surgery (kidney/pancreas), at the University of Calgary from August 2003 - July 2005, and a subsequent fellowship in liver transplant surgery & HPB, at the University of Western Ontario, from July 2006 to June 2008. He then completed extended training in live donor liver transplantation and HPB at the University of Toronto from July until Sept, 2008. He then traveled to the University of Kyoto, Japan, from October to December 2008 for extensive training in liver transplantation.

Dr. Hernandez-Alejandro also has ongoing research studies in basic science with projects related to liver ischaemia and gene slicing. His work received two international awards at transplant meetings last year.

Another one of his clinical interests is liver transplantation after cardiac death (DCD). LHSC and Western are both pioneers in this field.

In his spare time Dr. Hernandez-Alejandro likes to spend time with his family, participates with his children Julia, Victoria & Paulino, in sports activities and enjoys running. Born in Mexico City, Dr. Hernandez-Alejandro is married to his wife Ximena, a chef.

CSTAR Receives Accreditation as an Education Institute of the American College of Surgeons

CSTAR was recently welcomed into a international network of educational institutions that offer state-of-the-art surgical education.

Being awarded Accreditation as an Education Institute of the American College of Surgeons provides CSTAR with membership in an international network of similarly accredited education institutes across North America and Europe, setting the stage for more meaningful interaction and collaboration.

“We stand to learn much from our colleagues within this network who will hopefully, in turn, benefit from our contributions,” says John Parker, Director of CSTAR.

Receiving accreditation means that CSTAR meets an internationally accepted benchmark for surgical education and training that covers all aspects of program development, delivery, evaluation and quality improvement. The mission of the American College of Surgeons Network of Accredited Education Institutes is “enhancing patient safety through simulation.”

Parker says CSTAR, through its established education programming and its soon-to-be-completed Brent and Marilyn Kelman Centre for Advanced Learning, is now positioned to make meaningful contributions to advancing patient safety through simulation here in London and farther afield.

“Certainly this goal is consistent with the strategic plans of both LHSC and Schulich School of Medicine and Dentistry, and CSTAR will take every advantage of this accreditation to contribute to the realization of this goal,” he says.

Accreditation was awarded following a comprehensive evaluation of CSTAR, including a submission review, a site survey, and careful deliberation of the Accreditation Review Committee.

Photo: MPP John Wilkinson, Ontario Minister of Research and Innovation, recently visited CSTAR, which received accreditation by the American College of Surgeons. Here, Wilkinson (left) is seen with John Parker, Director of CSTAR, and Kirsten Krull-Naraj, IVP Surgery Services.
Dr. Jeremy Harris Discusses Endovascular Training in Canada vs. the U.S.

Vascular surgeon Dr. Jeremy Harris will join the department of surgery this summer, as the newest member of the vascular team, replacing Dr. Ken Harris. He is currently in Arizona undergoing additional endovascular training at the Arizona Heart Institute.

Dr. Harris decided to pursue further endovascular training in the U.S. as he wished to gain more experience primarily in peripheral endovascular interventions for infrainguinal, mesenteric, and renal occlusive disease.

“The skill set and knowledge required for these procedures is equally applicable to the evolving treatment options for more complex thoracic and abdominal aortic pathologies. Expertise in these newer techniques requires a certain volume of cases which can more easily be obtained at highly specialized cardiovascular centers,” says Dr. Harris.

He chose to work with Dr. Edward Diethrich and his group at the Arizona Heart Institute because of their international reputation as leaders in the field of endovascular therapy.

“Theyir access to new technologies both within and outside of clinical trials as well as ongoing efforts to investigate further options for endovascular approaches to various arterial and venous pathologies has made for an extremely productive and exciting experience. I am eager to return to Canada at the completion of my training with new ideas for both clinical and research endeavours.”

Training in the U.S has also provided him with the unique opportunity to interact with many clinical fellows from throughout the world.

“It has proven to be both an enjoyable and enlightening experience and has laid the groundwork for many future collaborative efforts.”

Dr. Harris will soon be back in London, where he pursued the majority of his education and training. He completed his undergraduate degree at the Richard Ivey School of Business, attended medical school at Western, and did both his general surgery residency and a vascular fellowship here as well. He is also currently enrolled in a Masters of Health Research Methodology at McMaster University, and is interested in pursuing clinical and research endeavors in endovascular approaches to peripheral vascular disease.

He is married to Teresa and they have 4 children: Owen (10), Jacob (8), Eli (4), and Francesa (1).

Lawson Internal Research Funds Announced

Congratulations to the following recipients of the Lawson Internal Research Fund:

**Dr. Chris Bailey** (and colleagues J. McBain, C. Dunning, and S. McLaulin,) for their study “Comparing the Fixation of Pedicle Screws in Osteoporotic Human Sacra Reinforced with Kryptonite Versus PMMA”

**Dr. Jim Johnson, Dr. Graham King and Dr. George Athwal** for their study “Design of a Soft-Tissue Tension Measurement System to Determine Loads in Ligaments & Tendons”

**Dr. David O’Gorman** for his study “POSTN in the Epithelial Mesenchymal Transition of HaCaT Cells”

Nineteen applications were funded for a total of $218,461. Congratulations to everyone who received funding.
Dr. Hao Wang completes PhD Thesis in Pathology while battling Organ Rejection

For Dr. Hao Wang, his award-winning work is his life. Recruited by the late Dr. Robert Zhong, he came to Canada from China to work and learn from the brightest minds in the field of organ transplantation.

In 2005, Dr. Wang made the decision to pursue a part-time PhD program in Pathology. Under the mentorship of Drs. John Denstedt, Bertha Garcia, and Bill Wall, he achieved his goal, successfully defending his thesis. It took Wang only three years to complete his PhD, which typically takes most candidates 5 years.

Wang already has two Masters degrees from China and UWO in the fields of transplant immunology and pathology. He felt an MD and PhD degree would enhance his lab and foster an even better research environment to translate the principles of his research to a human clinical setting.

With expertise in transplantation, microsurgery and immunosuppression, Dr. Wang’s research is making a significant impact. He directs a world-class microsurgery and primate surgery transplant team developing animal models that bridge basic research and clinical applications. His lab conducts research in one of three areas: experimental microsurgery; research with non-human primates; and transplant immunology.

According to Dr. Wang though, in the end, his research is always about improving the lives of transplant patients.

His world-class lab consists of 10 people, whose research is focused on understanding the cellular and molecular mechanisms of graft rejection and identifying an effective and safe strategy to induce transplant accommodation and tolerance in allo- and xenotransplant recipients.

Dr. Wang’s long-term research goal is to increase the number of living donors for organ transplantation and improve immunological graft acceptance in transplant patients.

In addition to his research, Dr. Wang has made significant contributions to his teaching activities in transplant research and microsurgical skills for residents, medical students, graduate students and fellows at Western and London Health Sciences Centre, and surgeons from other transplant centres around the world. They come to his lab, located at University Hospital, to practice and perfect their microsurgery skills.

Wang first became interested in the area of microsurgery and immunosuppression when he was working as a transplant surgeon in China, where they performed the first small bowel transplant in humans.

He still collaborates with his former colleagues, along with others in the U.S. and around the world but is very happy to be working and living in the city of London.

Dr. Hao Wang

Trauma Program Sweeps Trauma Association Awards

The Trauma Program received a number of awards at the recent combined meeting of the Trauma Association of Canada Annual Scientific Meeting and the Australasian Trauma Society, held in Auckland, New Zealand from March 4-7.

The team won 3 out of 4 research/injury prevention prizes.

Congratulations to the following Trauma Program members:

T. Charyk Stewart, D. Polgar, N. Parry, and M. Girotti, for their paper Moving from evidence to action: Prioritization of pediatric injury issues for focused injury prevention programming. (J&J Award for best injury prevention paper)

D. Polgar, M. Girotti, K. Grant, and T. Charyk Stewart, for their paper, Shaking up the system: Lessons learned from the implementation and evaluation of a Shaken Baby Syndrome prevention program. (ITNC award for best paper)

A. Lawendy, G. McGarr, J. Phillips, D. Sanders, N. Parry, D. Gray, and A. Badhwar, for their paper, Compartment syndrome causes a systemic inflammatory response and remote organ injury. (Best scientific paper by a resident or fellow)
Visiting Vascular Surgeon Discusses Less Invasive Therapy for Peripheral Arterial Disease

Dr. Jean Panneton was a guest of the Division of Vascular Surgery as a Visiting Professor. Dr. Panneton is the Chief of Vascular Surgery and Program Director at Eastern Virginia Medical School in Norfolk, VA, USA. He is an internationally recognized authority on lesser invasive interventional therapy for lower extremity peripheral vascular disease.

Dr. Panneton gave a lecture to a group including the vascular surgeons, interventional radiologists and technicians, residents, fellows, and nurses. He described his group’s experience of close to 1000 patients treated with less invasive techniques. He concluded that interventional therapy can achieve the results of open bypass surgery with the additional benefits of being outpatient based, and having fewer complications. These shorter hospital stays can result in decreased costs to the hospital.

Currently, most patients with peripheral vascular disease requiring intervention are treated with open bypass surgery. These patients are often elderly, have heart disease and are at risk of amputation. However, patients can benefit from an increasing utilization of these lesser invasive techniques through an ongoing collaboration between the vascular surgeons and interventional radiologists.

Dr. Panneton’s visit was much appreciated by all in attendance, and was generously supported by Dave Munshaw and Joanne White from Cook Canada.

Vascular Surgery Honours Dr. Ken Harris

Surgeons in the Division of Vascular Surgery have contributed $26,000 to fund a bursary to honour Dr. Ken Harris, who has left for his new role as Director of Education for the Royal College of Physicians and Surgeons of Canada.

This donation displays the exceptional commitment and support by members of the department, particularly in the current economic climate.
**CIHR Grant Winners Announced**

Congratulations to **Dr. Ruby Grewal** and **Dr. Joy MacDermid** for receiving a CIHR grant for their project “Identification of Risk of Adverse Activity Transition Following a Distal Radius Fracture”.

Distal radius (wrist) fractures (DRF) are common and thought to be inconsequential, but can cause significant disability. Grewal and McDermid’s study will establish the reliability of bone quality, mobility, and activity measures in patients ranging from 50-80 years of age under active treatment for a DRF and determine the relative importance of baseline physical impairments, activity level, social support and personal injury factors on loss of activity after a DRF.

Their work will help launch a large cohort study and research program on helping older adults successfully resume a healthy lifestyle following a distal radius fracture.

Congratulations to **Dr. Jim Johnson** and **Dr. Graham King** for receiving a CIHR grant for their study “Computer Assisted Surgery of the Elbow.”

Replacement of the fractured or diseased elbow with implants is becoming an increasingly popular treatment, with the intent to restore function and reduce disability and pain. However, failure to correctly align the implant to bone may result in detrimental changes in both the loading and motion characteristics of the joint, potentially leading to implant loosening and failure. It is logical to assume improved alignment of elbow implants may be enhanced via image and computer assisted technology. These techniques will also be applicable to ligament repairs and reconstruction, and fracture fixation. The objective of their study is to optimize and validate image and computer assisted surgical techniques for surgery of the elbow, and to determine the efficacy of these procedures using comparative biomechanical tests. Johnson and King anticipate these advances in surgical technique will lead to improved outcomes in patients who have undergone ligament repairs and reconstructions, fracture fixation and joint replacements.

**Additional Surgery Appointments & Accolades...**

**Dr. Neil Parry**, from the **Division of General Surgery** has been named the **Provincial Committee on Trauma (COT) Chair** with the American College of Surgeons. His role as chair is to oversee all Advanced Trauma Life Support (ATLS) activity within the province; organize and implement the Committee on Trauma resident research trauma paper competition for the province; Chair the provincial COT meetings; and write the COT annual report.

**Congratulations to the General Surgery Norvell Award Winners**

The Division of General Surgery recently handed out Norvell Awards to general surgery residents who achieved the highest mark on the CAGS exam. This year’s winners were:

- Year 1 Award: Rob Leeper
- Year 2 Award: Kris Croome
- Year 3 Award: Luc Dubois

Residents from the Schulich School far exceeded any other trainees in the country.

This year’s **Covidien Resident Award for Teaching Excellence** went to **Paul Karanikolas**.
Rapidly changing techniques in minimally invasive cardiac surgery are motivating an increasing number of cardiac surgery teams to learn and adopt new technologies and procedures. That’s what brought a multi-disciplinary cardiac surgery team from Montreal to CSTAR to gain knowledge and expertise from Dr. Bob Kiaii.

The two day education and training workshop focused on the work of Dr. Kiaii and his team, who have achieved a number of significant milestones in robotic-assisted cardiac surgery. Robotic cardiac surgery now comprises 80% of Dr. Kiaii’s practice with patients being referred to him from across Canada.

Under the mentorship of Dr. Kiaii and his cardiac surgery team, the visiting cardiac surgeons and operating room nurses from the Montreal Heart Institute and Hôpital Sacré-Cœur were active observers of a cardiac surgery case. In addition, the Montreal team practiced their robotic surgical and procedural skills for mitral valve repair within the simulated learning environment of CSTAR. This procedure is used to treat the narrowing or leakage of the mitral valve which is the “inflow” valve for the left side of the heart.

“We were able to appreciate the very intuitive nature of the robot”, said Dr. Michael Pellerin, Head of the Department of Surgery at the Montreal Heart Institute, “and practice advanced techniques in mitral valve repair.”

As other centres across Canada adopt robotic and other minimally invasive surgical technologies, CSTAR is witnessing a growing demand for multi-disciplinary team-based training and London is becoming the destination of choice for this type of programming.
Congratulations to Dr. John Vallely on his retirement!

Dr. John Vallely retired from the Department of Surgery this winter with over three decades in his Urology practice. The field of Urology has changed significantly since he joined the department 30 years ago. Dr. Vallely specialized in treating patients with incontinence and erectile dysfunction. Congratulations to him as he begins a new chapter in his life.

**UPCOMING EVENTS:**

Save the date!

- **Robert Zhong Department of Surgery Research Day**— Friday, June 26th at the Shuttleworth Auditorium, St. Joseph’s Health Care. This year’s speaker is Dr. Anthony Atala, a world-expert in tissue engineering.

- **Resident Recognition Event**: Friday, June 26 at the London Hunt and Country Club (evening event)

- **SAGES Workshop**
  Date: Thursday, May 7th and Friday, May 8th
  Location: CSTAR

- **CSTAR’s Advanced Video Assisted Thoracic Surgery Update 2009**
  Date: June 10th & 11th
  Location: CSTAR

**Acuity Star Update**

The Acuity Star system is being upgraded and new formats for your CV and Teaching Dossier will be launched in May.

A full How-To Guide is available online, and personalized training is available. Please contact Derrick Gould at derrick.gould@lhsc.on.ca or Marisa Kanas at marisa.kanas@lhsc.on.ca for more details.