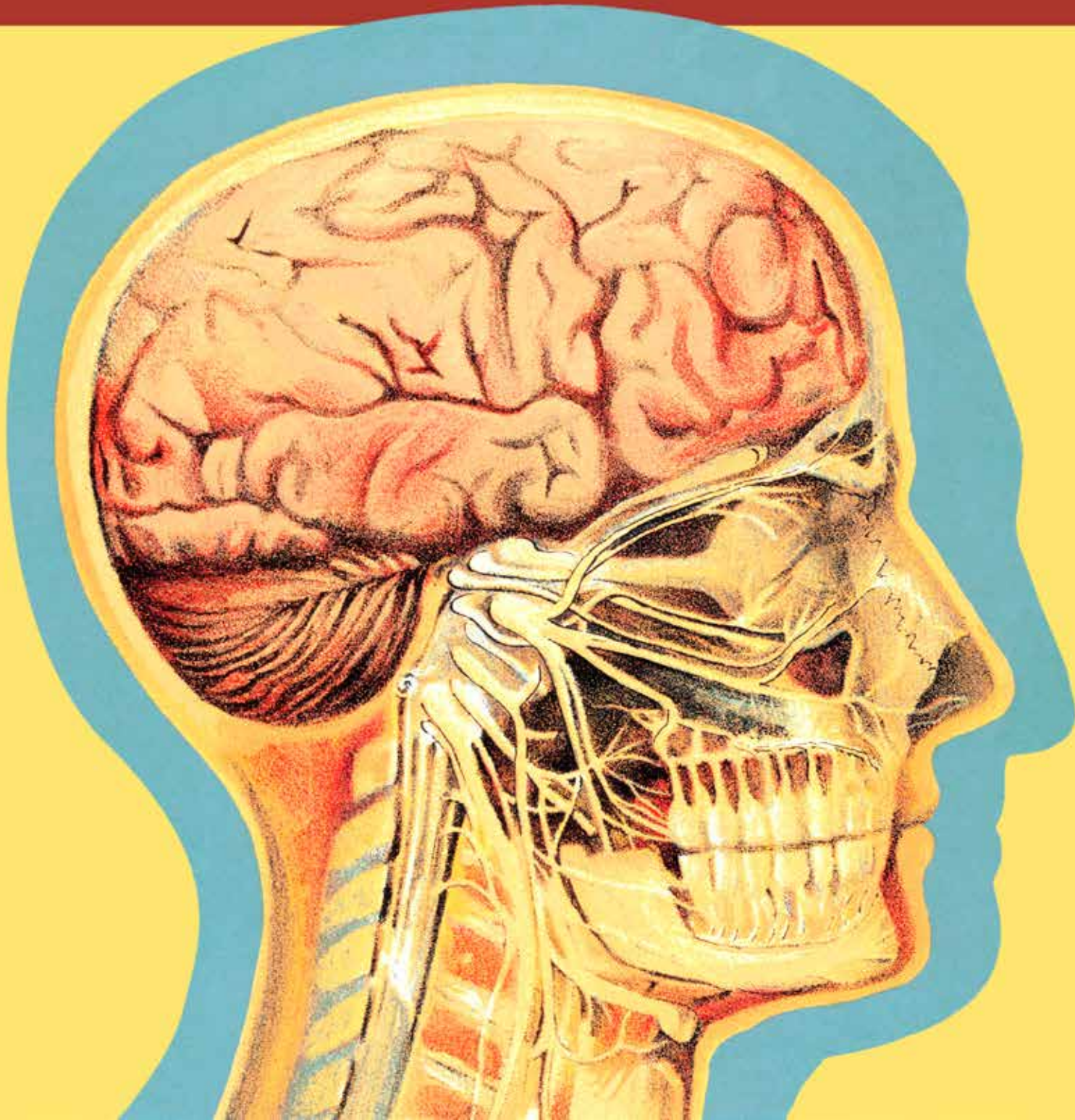




UNIVERSITY OF TORONTO
SURGICAL SKILLS CENTRE
AT MOUNT SINAI HOSPITAL

ANNUAL REPORT 2015





The University of Toronto Surgical Skills Centre at Mount Sinai Hospital is pleased to present its 2015 Annual Report. It has been another successful year, with well over 10 000 learners taking part in educational programs at the Centre.

Our Vision

Traditionally, surgical skills have been acquired in the operating room. However, with the complexity of modern surgical procedures and an increasing premium on surgery time, it is no longer feasible to rely on past methodology to encourage the acquisition of novel skills.

The Surgical Skills Centre provides a laboratory setting where basic and complex surgical procedures can be learned and practiced. Given the opportunity for repetition of technique and direct feedback, surgeons achieve a higher level of expertise at a higher rate of acquisition.

Honing the efficacy of its training method, the centre conducts educational research in skill acquisition and evaluation. This research provides answers to fundamental educational issues and produces an impressive record of surgical innovation.

Through a dedication to thoughtful, effective surgical training, the Surgical Skills Centre has become an internationally recognized centre of excellence in surgical education.

Mission

- To change the way fundamental surgical skills are taught and evaluated
- To provide a platform for continuing education in surgical skills
- To provide a laboratory for research to be done in, and development of surgical skills innovation
- To promote and enhance the teaching of surgical skills through the Surgical Skills Centre

Accredited Education Institute

The Surgical Skills Centre first became an Accredited Education Institute in 2006 through the American College of Surgeons.

The AEI Consortium offers opportunities on a global level for collaboration, research and access to resources from fellow institutes, as well as from the ACS Division of Education itself. The American College has developed Standards and Criteria to ensure the delivery of the highest quality surgical education. These standards clearly indicate how surgical education and training should be offered. A primary goal is the promotion of patient safety through the use of simulation, the development of new education, curriculum and technologies, identifying best practices, and the promotion of research and collaboration between institutes.

In October of 2015 the Surgical Skills Centre went through its reaccreditation process. It is a vigorous and lengthy application process. After the application questions were complete, the application was submitted to the American College of Surgeons. Dr. Melvin Freeman (MD, FACS) from the University of Washington visited the Centre in order to conduct the second step of the reaccreditation process, which is the site survey. In December, the report was submitted to the American College of Surgeons, and shortly thereafter we were granted accreditation. In the report from the American College of Surgeons, the Surgical Skills Centre was deemed to be compliant with regards to all criteria which needed to be met. The report states “The committee notes that this Institute represents an excellent model for all Accredited Educational Institutes and that it should be commended for its continued strengths. Overall, this is an outstanding institute, and it is in compliance with all the standards and criteria. The University of Toronto Surgical Skills Centre at Mount Sinai Hospital remains an exceptional asset to the Consortium and reaccreditation is strongly supported.”

Fundamentals of Laparoscopic Surgery

The SSC is a Fundamentals of Laparoscopic Surgery (FLS) accredited testing center, being granted by The Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) and is endorsed by the American College of Surgeons.

Lisa Satterthwaite, Senior Manager of the Surgical Skills Centre, and Jason Faria, Surgical Technician are both official proctors.

Letter from Dr. Safir

This has been an action-packed year for the Surgical Skills Centre (SSC), and we invite our friends to join in the excitement.

First and foremost, we are happy to announce that we've extended an invitation to the Department of Obstetrics and Gynecology to participate in our annual Surgical Prep Camp. With its expanded scope, the Prep Camp now serves over sixty incoming residents each year. We continue to observe the high rates of successful performance at the skills exam upon completion of this intensive course.

We are also eager to support our most junior learners. Thus, in 2015 we've launched a new program for undergraduate medical students who are interested in Orthopaedic surgery – the “Ortho experience”. This course involves 6 practical sessions and aims to facilitate medical students in their search for best-fitting specialty.

In addition to the new developments, we continue to support our well-established courses like SEAD, SEME – Supplemental Emergency Medicine Elective, Prelude to Surgery UG 3, Longitudinal Program UG 3, Divisional Boot Camps and Competency-based Curriculum.

In order to serve our learner population better, the Surgical Skills Centre ordered 10 Sonosite ultrasound machines this year. Keeping up with the explosion in use of ultrasound technology, we are prepared to train our learners to use the equipment they will encounter at the hospitals.

This year has been fruitful for the Surgical Skills Centre's international relationships. We continue to invite visitors from all over the globe and share our experiences with our old and new friends.

Finally, the Surgical Skills Centre has just successfully completed a renewal of its accreditation with the American College of Surgeons. As an accredited site since 2006, we are grateful to enjoy this continuous support and we appreciate the opportunity to demonstrate our value to the surgical community. We deeply cherish the recognition of our colleagues that manifests itself in the numerous awards and accolades – for example, our Senior Manager Lisa Satterthwaite recently received a SIM Citizenship award with SimONE and has been invited to participate as a co-chair Admin and Management committee with ACS – AEI.

The incredible growth of the Surgical Skills Centre that we've seen over the past few years is a direct result of the dedication and hard work that the SSC team tirelessly demonstrates. I am honoured to be a part of this caring, professional and dynamic crew.

Dr. Oleg Safir MD, MEd, FRCSC
D.H. Gales Director
Surgical Skills Centre



Letter from Dr Rutka

Towards the end of the 2015 calendar year, I was asked by some visiting surgeons from Ukraine whether I could instruct them how to perform a particular surgical procedure that they had watched me do on a couple of occasions in the operating room. The procedure itself was somewhat technical, and the different steps hard to implement without prior hands-on experience. Accordingly, I made arrangements for an appropriate specimen to arrive from the Department of Anatomy, and set up a personalized tutorial at the Surgical Skills Centre (SSC) on how to do the procedure complete with microscope, micro instruments, and high powered drills. Needless to say, my colleagues were amazed at this teaching experience and opportunity. They never have a chance in their country to “rehearse” surgery in this manner. It struck me once again as to how remarkable a facility the SSC is, and how fortunate we are to have it available for this purpose, and all other activities that are daily phenomena throughout the year.

Aided by superior staff who are always available to look after the needs of all users, the SSC is notable for having had near constant personnel over many years. The fact that turnover has been almost negligible amongst the staff speaks highly to the dedication and job satisfaction they all display. For this, once again I should like to thank SSC Manager Lisa Satterthwaite, and SSC Director, Dr Oleg Safir. Special thanks are also given to Dr. Jackie James, Vice President of Education at Mt Sinai Hospital, with whom we have worked to ensure that learners throughout the hospital have access to simulation techniques and expertise.

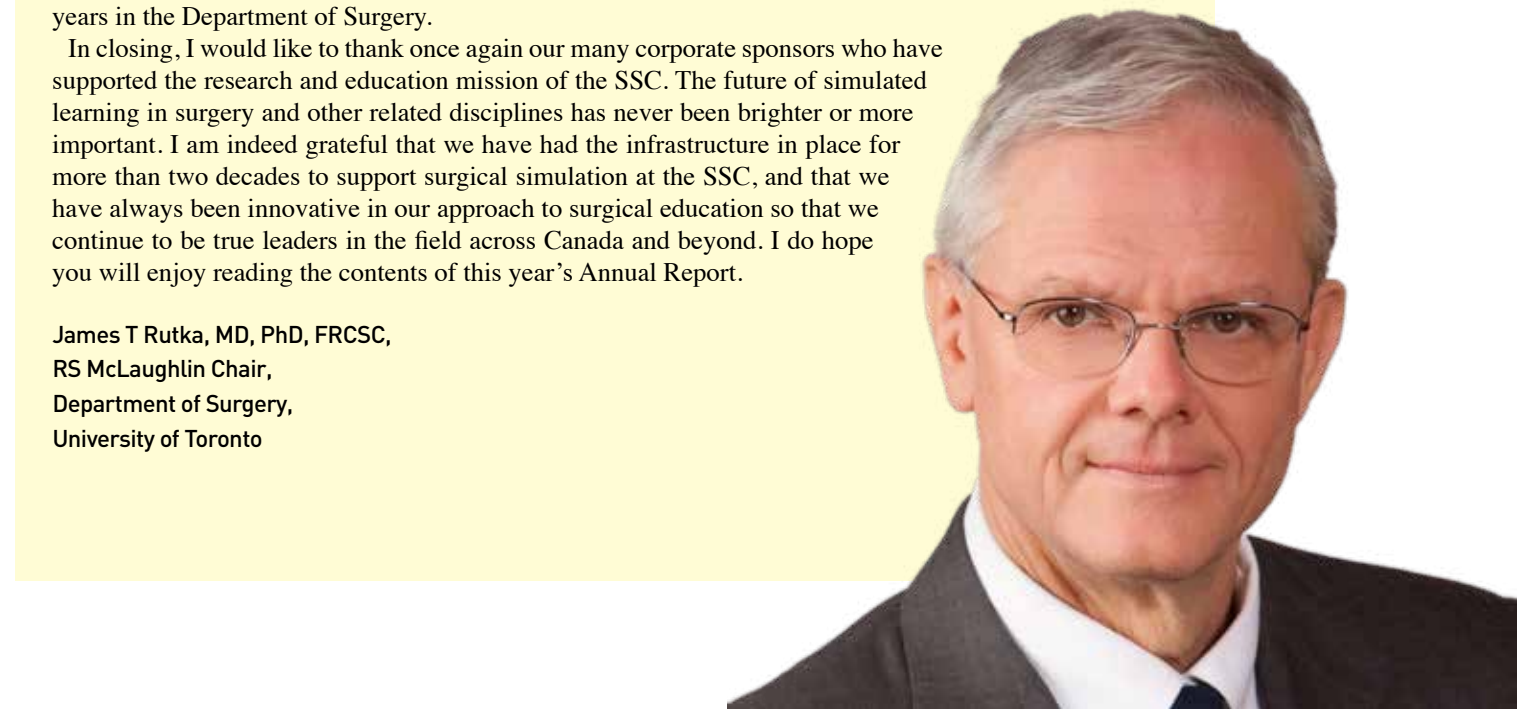
This year marked yet again another review by the American College of Surgeons' Accredited Education Institutes (ACS AEI's). I am pleased to report that the SSC at U of T has once more been granted Level I accreditation as an Education Institute. As such, we are one of four AEI's in Canada to reach and maintain this distinction, amongst 94 ACS AEI's worldwide. In case you are interested, the other programs in Canada are the Canadian Surgical Technologies and Advanced Robotics (CSTAR) centre at Western University, the Centre of Excellence for simulation Education and Innovation (CESEI) at the University of British Columbia, and the Steinberg Centre for Simulation and Interactive Learning at McGill University.

One of the main foci of the SSC this past year has been the move towards “Competency by Design” (CBD) for postgraduate medical education programs. The Department of Otolaryngology at U of T is among the first to move steadily towards CBD to satisfy the requirements and expectations of the Royal College of Physicians and Surgeons of Canada (RCPSC). In the Department of Surgery, the Surgical Foundations Course, headed by Director of PGME, Dr Ronald Levine, will soon be moving towards CBD. Following this, the RCPSC Specialty Committees will be responsible for the “roll out” of CBD in each of the surgical specialties in a graduated manner.

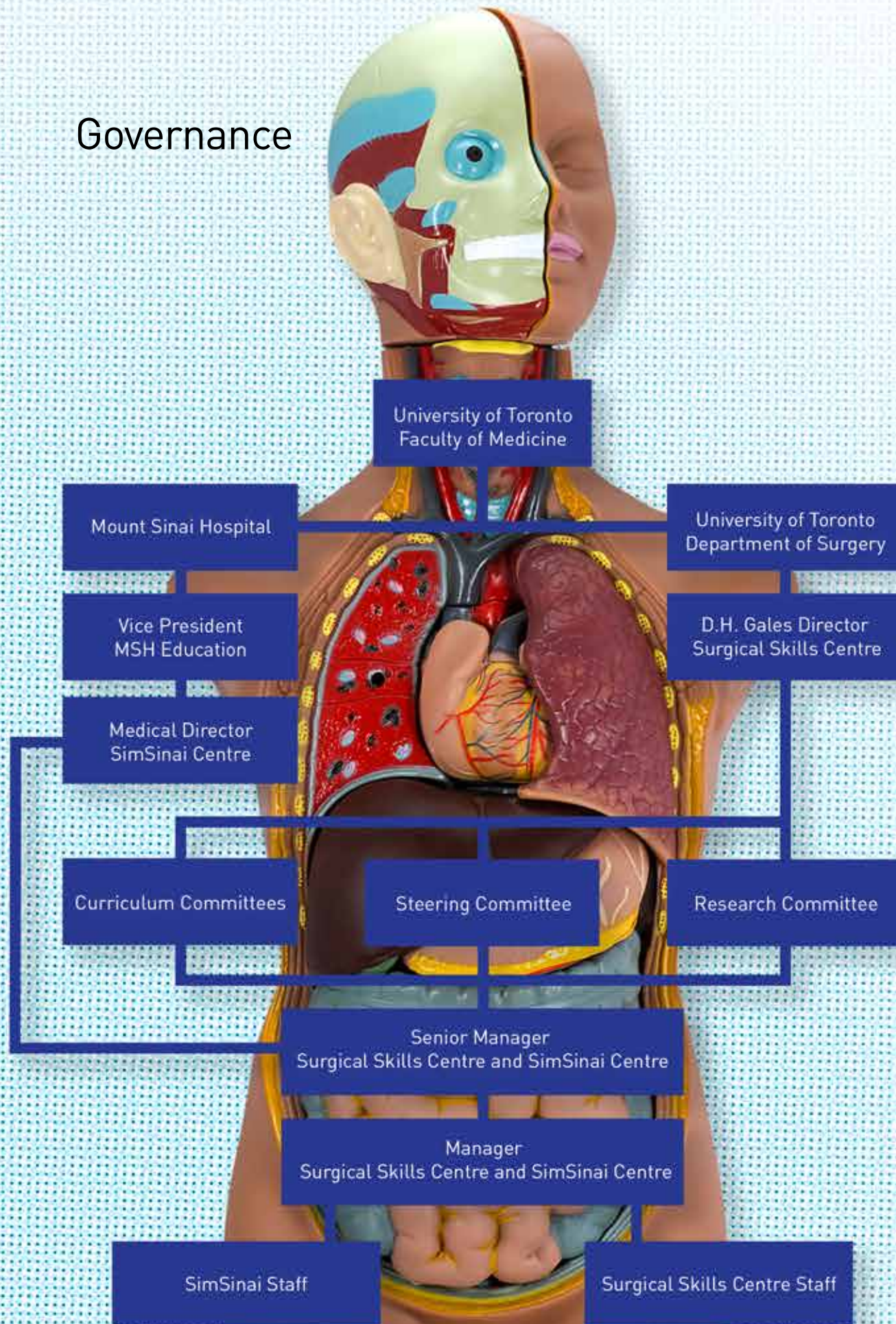
Thankfully, amidst this change, we have had prior significant experience with competency-based education and curricular design with the establishment of the “Competency Based Curriculum” (CBC) in the Division of Orthopaedics which is now a fully accredited program across all years in the Department of Surgery.

In closing, I would like to thank once again our many corporate sponsors who have supported the research and education mission of the SSC. The future of simulated learning in surgery and other related disciplines has never been brighter or more important. I am indeed grateful that we have had the infrastructure in place for more than two decades to support surgical simulation at the SSC, and that we have always been innovative in our approach to surgical education so that we continue to be true leaders in the field across Canada and beyond. I do hope you will enjoy reading the contents of this year's Annual Report.

James T Rutka, MD, PhD, FRCSC,
RS McLaughlin Chair,
Department of Surgery,
University of Toronto



Governance



Teaching Award



The superb faculty from the University of Toronto Department of Surgery donates their time to teach at the Surgical Prep camp and Division specific teaching sessions held for the residents. Every year, the residents nominate an outstanding faculty member to receive the University of Toronto Surgical Skills Centre at Mount Sinai Hospital Education Award for Outstanding Contributions to Surgical Skills Education.

We are pleased to announce the winner for 2015 was Dr. Jeremy Hall from the Division of Orthopaedic Surgery. Dr. Hall, based at St. Michael's Hospital, has a special interest in Upper Extremity and Trauma.

Dr. Hall's dedication to teaching the Competency Based Curriculum is recognized by the residents as being invaluable. Congratulations Dr. Hall!

Department of Surgery

Surgical Prep Camp Phases I and II

Surgical Prep Camp Phase I and II/Prep Camp Schedules

In the past, the residents attended a two hour teaching session once per week from September to May. After the success of the Toronto Orthopaedic Boot Camp in conjunction with the Competency Based Curriculum, a new model of teaching was developed three years ago. The Department of Surgery Prep Camp Phase 1 and 2 first executed in July of 2013. It is an intense two week program, with mandatory attendance. For the first two years, all surgical residents from the Divisions within the Department of Surgery attended, as well as 4 residents from NOSM (Northern Ontario School of Medicine). For the Prep Camp that occurred in July 2015, residents from the Department of Obstetrics and Gynaecology as well as those from Otolaryngology: Head and Neck Surgery also attended. There were a total of 65 residents.

Program Directors outlined several core skills that were deemed essential for all surgical residents. The Prep Camp includes a wide variety of lecture series, competitions, and corresponding hands-on skills training. It included MCQ testing and Pre and Post OSATS (Objective Structured Assessment of Technical Skills) examinations.

The Fall Prep Camp (Phase 2) occurs for two hours per week, with a total of 10 sessions occurring. The teaching of both Phase 1 and 2 is performed by faculty, residents as educators, nursing and industry group educators.

PREP Camp Phase I

Date	Day	Session
July 6	1	Department of Surgery Orientation
July 7	2	OSATS Pre-Examination
July 8	3	Prepping and Draping, Gown and Glove, Patient Consent, Scrubbing, Patient Positioning, Basic Knot Tying
July 9	4	Suturing and Knot Tying, Clamp Cut Tie Technique, Deep Knot Tying, General/Basic Instrument ID, Surgical Accessories
July 10	5	Suturing and Knot Tying, Deep Knot Tying, Clamping, Abdominal Wound Closure and Dressings, Emergency Simulation Scenarios
July 13	6	Suturing Competition, Airway Olympics, Ultrasound Techniques, Cautery Techniques, NG Tube Insertion
July 14	7	Excisional Biopsy, Catheterization, Tracheostomy, Chest Tube Insertion
July 15	8	Conscious Sedation, Open Practice Session
July 16	9	Radiology Seminars
July 17	10	OSATS Post Examination

PREP Camp Phase II

Date	Day	Session
September 22	1	Assorted Local Flaps, Advanced Wound Closures
September 29	2	Vascular Anastomosis, Tendon Injury Repair
October 6	3	VAC Dressing with KCI and Wound Care
October 20	4	Skin Grafting, Bowel Anastomosis
October 27	5	Airway Olympics, Tracheostomy and Chest Tube Review
November 3	6	Ultra Sound Skills with Line Insertions, Use of Power Tools
November 10	7	Open Practice Session
November 17	8	General Laparoscopic Skills, Microsurgery I
November 24	9	Laparoscopic Gallbladder, Microsurgery II

Division of Anatomy and Body Donation Program

The SSC would not be able to offer numerous educational programs if not for the support received from the Division of Anatomy. Training curriculums are supported with cadaveric tissue from the University of Toronto Body Donation program.

The ability to practice surgical techniques on high fidelity specimens in an invaluable experience for the residents.

The Body Donation Program has worked side-by-side with the Division of Anatomy at the University of Toronto for over 15 years.

Division of Cardiac Surgery

For the second year in a row, the junior cardiac surgery residents (PGY 1-3) attended a Summer Boot Camp consisting of multiple sessions. The purpose of the Boot Camp is to make the junior residents more knowledgeable regarding fundamental technical skills specific to cardiac surgery. Senior residents were present at the skills session to assist their junior colleagues.

Summer Boot Camp

- Aortic Cannulation
- Anastomosis
- Aortic Valve
- Open Practice

Surgical skills training sessions were also held throughout the year, for both junior and senior residents.

Sessions

- Coronary Anastomosis
- ASD/VSD Repair
- Conduit Harvest, Sternotomy, Mitral Valve Exposure, Donor Harvest

Division of General Surgery

Several sessions were held for the junior and senior general surgery residents. As well, the Division of General Surgery ensured that all PGY 1’s were trained and tested at the SSC in the Fundamentals of Laparoscopic Surgery

Sessions

- Town Hall Session
- Emergency Medicine Update
- Fundamentals of Laparoscopic Surgery Update
- Minimally Invasive Surgery Update

Sessions for PGY 2 Curriculum

- Trauma Ultrasound Course Part 1
- Trauma Ultrasound Course Part 2

Division of Neurosurgery

The PGY 1 Neurosurgery residents attended Summer Boot Camp skills session in 2015, with the sessions being run by Dr. Abhaya Kulkarni.

Sessions

- Midas Rex Drilling
- Pterional Craniotomy and Suboccipital Craniotomy
- Lumbar Drain and EVD set up

Others skills session were held through the year, including two Introduction to Microsurgery Courses for PGY 3 residents and a course titled “Intraventricular and Craniofacial Endoscopy” that was taught by Dr. James Drake.

Lougheed Microsurgical Course

In the spring of 2015, the Lougheed Microsurgical Course celebrated its 50th anniversary. The course is attended by senior Neurosurgical residents from across Canada, and was run by Dr. Ivan Radovanovic and Dr. Michael Tymianski. It’s a weeklong session that all Neuro residents in Canada will attend during their residency. The course is dedicated to Dr. Bill Lougheed, who is said to be one of Canada’s great teachers of operative neurosurgery.

In the fall of 2015, the 51st Lougheed Microsurgical Course was also held at the Surgical Skills Centre.

Division of Orthopaedic Surgery

Toronto Orthopaedic Boot Camp

The Toronto Orthopaedic Boot Camp was launched in 2009, and has proven to be a huge success in that technical skills are taught via competency based training, allowing each resident to move through the program at their own speed. It is a focused curriculum for PGY 1’s.

Toronto Orthopaedic Boot Camp Schedule

Date	Day	Session
July 20	1	Casting and Splinting
July 21	2	AO Principals and Tendon Repair
July 22	3	AO Large Fragment Sets
July 23	4	Platting and Small Fragment Sets
July 24	5	Cadaveric Dissection
July 27	6	Upper Extremity
July 28	7	IM Nail: Femur and Tibia
July 29	8	Ex Fix Application to Femur and Tibia
July 30	9	Lower Extremity Dissection and Platting of Tibial Plateau
July 31	10	Lower Extremity Dissection and Fixation of Bimal Ankle
August 3	11	Cadaveric Dissection
August 4	12	Upper Extremity Dissection And Bone Fixation
August 5	13	Exit Exam and Deficiency Day
August 6	14	Exit Exam and Deficiency Day

The University of Toronto orthopaedic residency training program runs year round, and includes 21 modules composed of skills training and development, practice time and examination sessions. Many of these sessions occur at the Surgical Skills Centre.

Division of Plastic and Reconstructive Surgery

The Surgical Skills Centre continues to work with the Division of Plastic and Reconstructive Surgery to implement their division specific curriculum for junior and senior residents.

A boot camp is held in the summer for PGY 2 residents only.

The curriculum through the rest of the year teaches juniors and seniors separately.

Boot camp for PGY 2’s

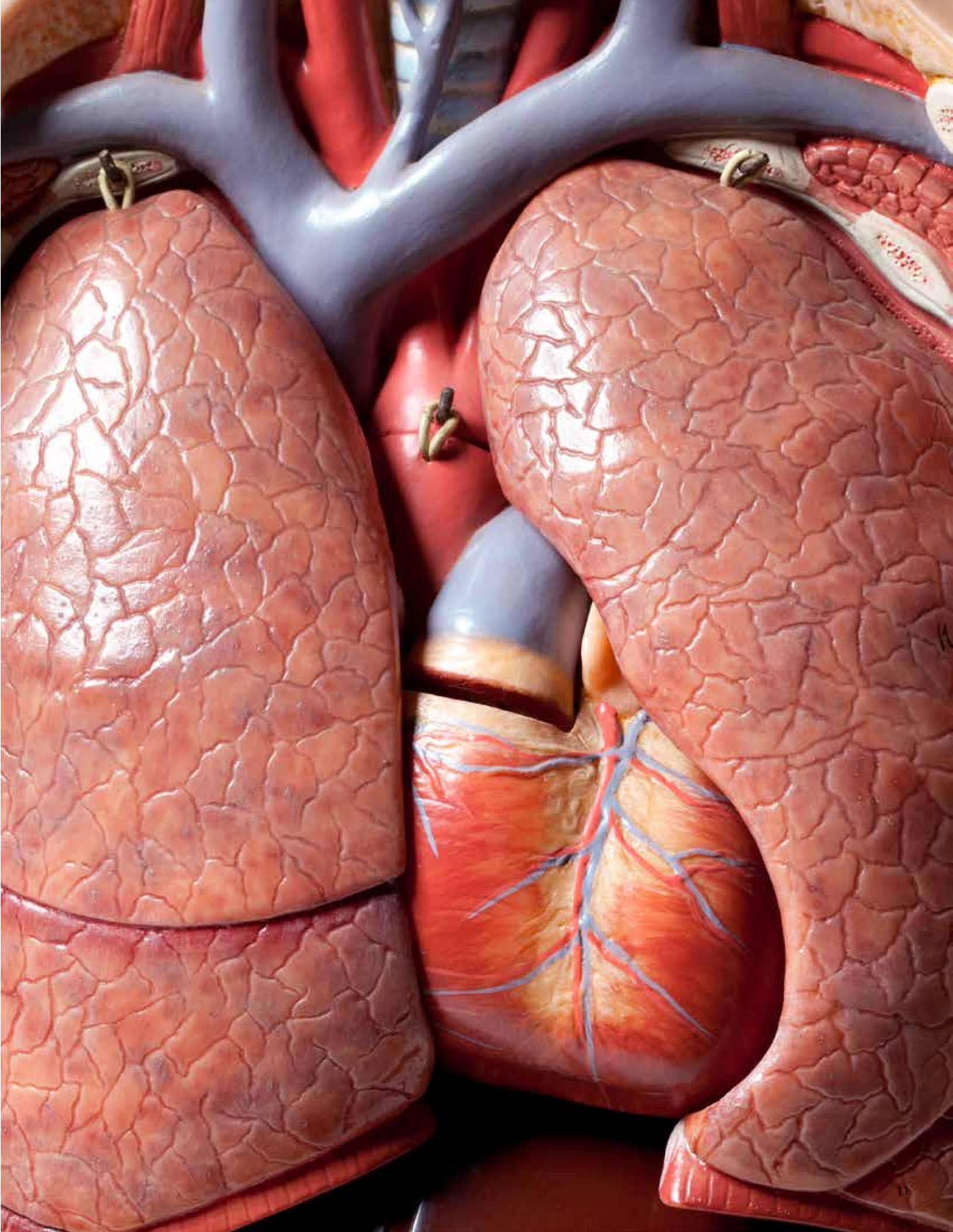
- Finger amputation
- Bone Fractures of the Hand
- Tendon Repair
- Breast Marking
- Micro Repair
- Introduction to Being a Senior Resident

Academic half day Senior Surgical Skills sessions

- Craniofacial-Reconstruction
- Craniofacial-Acute Injuries
- Flaps-Trunk and Face
- Flaps-Upper and Lower Extremity

Division of Urology

- Introduction to Urology: Adult and Pediatric Catheterization, Suprapubic Tube Placement, Cystoscope Assembly and Proper Usage
- Pelvic Anatomy
- Microsurgery I
- Microsurgery II



- Open Procedures Porcine Lab
- Laparoscopic Procedures Porcine Lab
- Pediatric Urology/Andrology Fellows: Elements of Microsurgery Skills Course

Division of Vascular Surgery

The Division of Vascular Surgery also organized a Summer Boot Camp for its first year residents in the summer of 2015, allowing time for dedicated teaching of vascular specific skills.

Boot Camp Schedule

- Vascular Anastomosis and Embolectomy
- Sapheno Femoral Dissection, Arterial and Venous Physiology
- Carotid EA and Open AAA
- Medtronic EVAR simulator, Open AAA
- Anastomosis and Embolectomy
- Open AAA/Endovascular Gear and Techniques
- Ultrasound and Vascular Anastomosis
- CEA and AAA Practice/”Being a Vascular Surgery Resident”
- Final Evaluation and Feedback

University of Toronto

Departmental Programs

Department of Anaesthesia

- Epidural Hands on Workshop
- Vascular Access
- Spinal Anaesthesia
- Sterile Techniques
- Airway Workshop
- Airway Simulation Workshop
- Surgical Airway Workshop
- 13th Annual Obstetric Anaesthesia Workshop

Department of Family and Community Medicine

- Mount Sinai and Toronto Western Family Medicine Resident Obstetrics Skills Day

Department of Obstetrics and Gynecology

Core Curriculum

- Wound Closure/ Marsupialization
- Operative Delivery
- IUD Insertion and Endometrial Biopsy
- Operative Hysteroscopy
- Bladder Repairs
- Bowel and Vascular Repair
- Laparoscopic Skills
- OSATS Exam

Department of Ophthalmology and Vision Sciences

- Eye Lid Flaps
- Eye Lid Repair

- Strabismus I
- Strabismus II
- TORIC: Toronto Ophthalmology Resident Introductory Course

Department of Otolaryngology Head and Neck Surgery, OHNS

- Multiple temporal bone drilling sessions for Junior and Senior residents
- Soft Tissue Dissection Workshop
- 5th Toronto Voice Box Course
- Sinoscopy
- Toronto Rhinoplasty Course
- 5th Toronto Endoscopic Ear Surgery Course
- University of Toronto Update 2015
- Midas Otolaryngology HNS Workshop

University of Toronto Faculty of Medicine

Division of Cardiology

- Internal Jugular Skills Session
- Periocardiocentesis Skills Session
- Transesophageal Echocardiogram

Division of Critical Care Medicine

- Bronchoscopy Course for Critical Care Medicine Residents
- Hands of Airway Course for Critical Care Medicine Fellows

Division of Emergency Medicine

- ABC’s of Emergency Medicine
- SEME (Supplemental Emergency Medicine Experience)

Division of General Internal Medicine

- General Internal Medicine Procedures Course

Division of Nephrology

- Nephrology Fellows Ultrasound Guided Line Insertion
- Nephrology Line Insertion Simulation Training
- Kidney Transplant Biopsy Program

Division of Respiriology

- The Basics of Bronchoscopy: Introductory Course for First Year Respiriology Residents in Ontario
- Chest Tube Insertion and Usage of Ultrasound
- Airway Course I and II
- Pleural Course I and II
- Objective Structured Assessment of Technical Skills Exam (OSATS)

Faculty of Dentistry- Department of Oral and Maxillofacial Surgery

- Suturing
- Wiring of Teeth

Undergraduate Medical Education

Department of Surgery Undergraduate “Prelude to Surgery”

All third year medical students attend a mandatory one week surgical skills program as part of the Surgical Clerkship. Previously known as “Crash Course in Surgery”, the program underwent major changes in 2015 and is now called “Prelude to Surgery”. The medical students start each day with a lecture, and are also presented actual cases by resident instructors. In terms of skills, the residents instruct the students on how to do specific tasks. The medical students then rely on peer to peer teaching and evaluation when practicing the skills.

The purpose of the rotation is to introduce and familiarize medical students with invaluable basic surgical knowledge.

Students learn basic suturing techniques, intubation, casting, insertion of Foley catheter, chest tube insertion and examination of a breast lump.

- SEAD Program (Surgical Exploration and Discovery)
- EM Undergrad Boot Camp
- MMMD (Mechanisms, Manifestations and Management of Disease)
- Longitudinal Integrated Clerkship
- Ortho Elective Experience Skills Lab
- Orthopaedic Special Interest Group

Industry Courses

- Allergan- Facelift Injectables
- Covidien- OBGYN Oncology Session
- Covidien-Advanced Obstetrics and Gynecology
- Zimmer- TM Ankle Workshop
- Zimmer-DeNovoNT Cadaveric Lab
- Allergan- Chronic Migraine Advisory Board
- Allergan- Canadian Society of Plastic Surgical Nurses
- Depuy Synthes- Platform Shoulder Cadaveric Course
- A.O Trauma- North American Pelvic and Acetabular Fracture Management Course
- Zimmer- Nexel Elbow Workshop
- Hsu Hotta- Facial Anatomy; Facial Injections; Sialendoscopy: Lecture and Hands-on Lab Course; Facial Injection II
- Integra Life Sciences- Cadence Total Ankle Evaluation
- Acelity-Bioskills Lab
- Zimmer Biomet Canada, Inc.-Posterior Cervical Fusion System
- Cook Medical- Methods of Repairing Abdominal Wall

Research

The Surgical Skills Centre continues to have a very active research profile, and act as the foundation for many external surgeries research projects. The skills lab allows the research team the opportunity to host the hands on technical skills portion of the research within the lab. This process is favourable, as the lab has most of the models, cadavers and equipment required. We are not required to create and maintain the administrative footprint needed for research documentation and data analysis.

We have also been involved with a large international research project entitled COSATS (Colorectal Objective Structured Assessment of Technical Skills). This is a new technical assessment of skills for colorectal surgeons. It was initially tested on June 4th 2011 at the lab, with great success. The purpose is to further evaluate a method of technical skills assessment for colorectal fellows, as well as to establish the validity and reliability of COSATS. This project, hopefully, will become the foundation for other societies to create validated technical skills exams as part of board certifications.

2015 Research Projects and Publications

- *Does simulation training in managing acute Medical emergencies improve comfort level in surgical specialty residents?*- McMurray L, Cho D, Slomer A, Kaul T
- *Design and validation of a model for assessment of procedural skills in open surgery*- Rittenhouse N, Sharma B, Sonnadara R, Mihailidis A, Grantcharov T.
- *Performance of Temporary Hemodialysis Catheter Insertion by Nephrology Fellows and Attending Nephrologists*- McQuillan R, Clark E, Zahirieh A, Cohen E, Paparello J, Wayne D, Barsuk J.
- *We Need to Train the Trainers*-Asif A, Beathard G.
- *The Location of the Branches of the Frontal Nerve in the Anterior Orbit*- Yang P, Micieli J, Tucker N.
- *Image-guided Minimally Invasive Functional Hemispherotomy for Intractable Epilepsy*-Rutka J, Drake J, Ibrahim G, Eastwood K, Looi T.
- *Endoscopic Approach to Trigeminal Nerve*-Zadeh G, Knlironomos G, Gonen L.
- *Combining Independent Discovery and Explicit Instructions in Medical Skills Training: Does Exploration Prepare Students for Instructions*- Mironova P, Kulasegaram K, Moulton CA, Ringsted C, Axelrod D, Brydges R.
- *Fluoroscopy Research Project:Sacro Ileo Joint Investigation*- Agur A.
- *Lap Cut Study*- Lee J.
- *Robotic Approach to Cleft Palate Repair*- Podosky D.
- *Objective Structured Assessment of Nontechnical Skills: Reliability of a Global Rating Scale for the In-training Assessment in the Operating Room*-Dedy NJ, Szasz P, Louridas M, Bonrath EM, Husslein H, Grantcharov T.
- *Risk Factors for Subsidence of a Modular Tapered Femoral Stem Used for Revision Total Hip Arthroplasty* -Tangsataporn S, Safir O, Vincent A, Abdelbary H, Gross A, Kuzyk P.
- Journal of Surgical Education, November 2015. *How did they get here? Survey results of conceptions of medical student clinical skill acquisition*; Amalia Cochran MD, Ruth Braga, RN, BSN; Lisa Satterthwaite, RPN
- British Journal of Surgery, July 2015. *Setting passing scores for technical performance in surgery: lessons learned from 10 years of resident assessment*; de Montbrun S., Satterthwaite L., Grantcherov T.
- Annals of Surgery July 2015 submitted. *Implementing and evaluating a national certification technical skills exam: the Colorectal Objective Structured Assessment of Technical Skill (COSATS)*. de Montbrun, Sandra L.; Roberts, Patricia L.; Lowry, Ann C.; Ault, Glenn T.; Burnstein, Marcus J.; Cataldo, Peter A.; Dozois, Eric J.; Dunn, Gary D.; Fleshman, James; Isenberg, Gerald A.; Mahmoud, Najjia N.; Reznick, Richard K.; Satterthwaite, Lisa; Schoetz, David Jr; Trudel, Judith L.; Weiss, Eric G.; Wexner, Steven D.; MacRae, Helen.

Co-Op Students and Volunteers

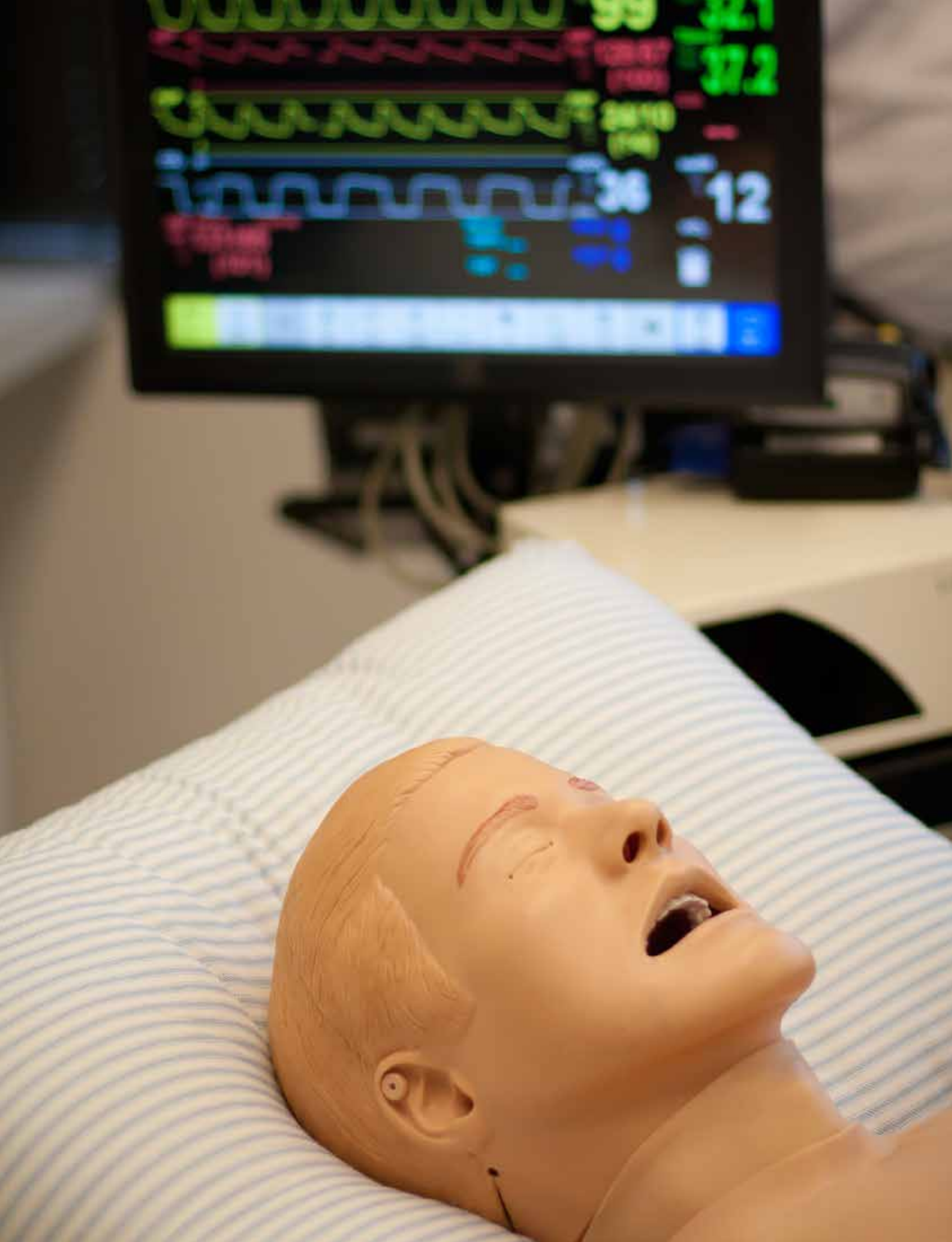
The Surgical Skills Centre is a hub of activity, with courses running on a daily basis, and more often than not multiple courses running on any given day. All educational sessions are set up and managed by the centre’s 4 full time and 1 part time surgical technicians.

We are extremely grateful to the Volunteer Services Department who matches us with appropriate volunteers and co-op students throughout the year. To date, we have had the pleasure of getting to know, mentor and work with 90 volunteers and co-operative education students.

It is beneficial to all parties involved. The volunteers and co-op students gain invaluable knowledge about medical education, surgery and technical skills. Many have gone on to pursue careers in medicine and it is also very helpful for us to have the extra set of hands.

We appreciate their commitment and hard work. In 2015, we had co-op students Lauren Tetelbaun, Amanda Walchenberg, Jaclyn Winitsky, Elizabeth Karvasarski and Bari Chelsky all from Westmount Collegiate Institute. We also had Sangyun Skin (Alex) from Brebeuf College School.

Thank you all!



SimSinai Centre

Letter from Dr. Perelman

SimSinai continues to support simulation-based education programs and events at Mount Sinai Hospital, as well as to provide resources and expertise locally, provincially, nationally and internationally.

Our continuous collaboration with the Surgical Skills Centre boasts a successful model of integration which has resulted in very exciting initiatives, such as the addition of high fidelity immersive team training and crisis resource management, to state-of-the-art technical skill training offered at the SSC.

This year ends with some exciting changes: infection control offices have moved to a new location within the hospital and SimSinai Centre will be undergoing construction soon. It is our goal to increase the number of simulation rooms available with a more diverse number of training mannequins, improve the front reception area for better flow, allow for better and more private debriefing capacities, improve our scenario recording abilities and increase our storage area. With the support of the MSH administration, specifically our Senior VP, Dr. Maureen Shandling, Mount Sinai VP of Education, Dr. Jackie James, and Directors of Centers of Excellence at Mount Sinai, especially Dr. Howard Ovens, SimSinai has been expanded by 600sf. We have to acknowledge and express our gratitude to Dr. Allison McGeer, Director of Infection Control, who was instrumental in moving the offices of Infection Control Research to make this happen. Currently, we are working with the MSH Foundation on securing support for the renovations, which will bring new audio-visual and simulation capabilities to SimSinai enabling us to maintain a leading role within simulation.

This year we have embarked on developing our own cadre of Basic Life Support (BLS) Instructors to add BLS certification to the spectrum of the services we provide to our community of healthcare professionals. We continue to be a well recognized Advanced Cardiac Life Support (ACLS) training site and work closely with the Heart and Stroke Foundation to improve the quality of training. This year alone we have certified nearly 600 ACLS providers at SimSinai as well as another 100 in the centres we collaborate with.

A SimSinai-developed certification course, Methods of Adult Procedural Sedation (MAPS) has been included in the preconference program at the largest practical Emergency conference in the country, Emergency Medical Update (EMU 2016). We are presently working on developing customized courses for dental sedation and emergency ultrasound-guided regional pain management.

SimSinai continues to be engaged in various academic activities. We are an active partner and participant at the University of Toronto Educators in Emergency Medicine (UTEEM), which SimSinai staff presented at the various events including the International Meeting for Simulation in Healthcare (IMSH) and the McMaster University Emergency Medicine Conference. Additionally, we are closely involved with the SEME (Supplementary Emergency Medicine Elective) program which provides family physicians with a three-month, full time, remunerated fellowship through a hands-on EM experience and simulation-based training.

Throughout 2015 SimSinai staff has reached out to other institutions outside of Toronto, such as the Niagara Debrief Seminar and the Brantford Medical Simulation Laboratory. Specifically, Dr. Sev Pereleman, Vagia Campbell and Dr. Luke Devine were invited by the leadership of Niagara Health System (NHS) to deliver a one-day debriefing seminar on March 31, 2015. The aim of the session was to familiarize the participants with debriefing principles, to begin developing their capacity to lead debriefings and ultimately to start providing them with the tools that they can build upon and to eventually teach debriefing skills to other members within their institution. The session involved didactic sessions, but primarily involved hands on simulation training. Based on the success of this session, future sessions may be planned at NHS or other sites. Also, Dr. Perelman and Dr. Wansbrough journeyed beyond the walls of SimSinai in an unprecedented expedition to visit a novel simulation program, the Brantford Medical Simulation Laboratory. This low cost, high fidelity simulation lab was designed by two recent U of T Emergency Medicine graduates, Dr. Chris Keefer and Dr. Kaitlin Link. They have channeled their inspiration from their simulation experience at SimSinai into building a community based training program for family medicine trainees, residents, allied health care professionals and staff physicians at Brantford General Hospital. It is very rewarding to see graduates from the SimSinai program take the “seed” of simulation and plant it into a rural program. Moving forward, the hope is to expand the lab to offer simulation sessions to regional community centres with the goal of improving quality of care and teamwork within the emergency room and critical care setting.

SimSinai continues to support research activities. We are proud in our researchers, Dr. Zeev Friedman, Dr. Rory Windrim, Dr. Eric You-Ten, Dr. Kristina Khanduja, Dr. Luke Devine, and others who continue to produce and publish cutting edge medical education. Furthermore, we congratulate Drs. Hadar Rosen, Stefania Ronzoni,

Yee Man Lee, Lara Gotha and Rory Windrim from Maternal Fetal Medicine (Department of Obstetrics and Gynaecology) whose study Simulator Based Obstetric Ultrasound Training: A Prospective Randomized Blinded Study won the Best Oral Presentation Award at the 44th Annual meeting of the National Association of Academic Professionals in Obstetrics and Gynaecology.

SimSinai Centre activities and initiatives have grown in the past year and we hope to continue with this momentum in the years to come.

Dr. Sev Perelman MD, MSc, CCFP(EM)
Medical Director, SimSinai Centre

Available Equipment

- 3x SimMan (Laerdal)
- 1x SimJunior (Laerdal)
- 2x Newborn HAL (Gaumard)
- 1x Resusci Annie (Laerdal)
- 1x HeartSim 2000 (Laerdal)
- 1x Birthing Noelle (Gaumard)
- 3x Crash Cart with Phillips Defibrillator
- 1x AED (Phillips)
- 1x Infant warmer
- 4x Adult Airway Management Trainer (Laerdal) with 4 airway kits
- 3x Paediatric Airway heads
- 3x CPR Manikins (Prestan)
- 2x Vimedix Models with x1 Vimedix computer
- 3x Deluxe Difficult Airway Trainers
- 2x EZ-IO
- Laerdal Debriefing Software

Publications

1. Siddiqui N, Arzola C, Friedman Z, Guerina L, You-Ten KE. (2015). *Ultrasound Improves Cricothyrotomy Success in Cadavers with Poorly Defined Neck Anatomy: A Randomized Control Trial*. *Anesthesiology*. 123(5): 1033-41.

2. Friedman Z, Hayter MA, Everett TC, Matava CT, Noble LM, Bould MD. (2015). *Power and conflict: the effect of a superior’s interpersonal behaviour on trainees’ ability to challenge authority during a simulated airway emergency*. *Anaesthesia*. 70(10): 1119-29.

3. Boulis S , Khanduja PK , Downey K , Friedman Z. (2015). *Substance abuse: a national survey of Canadian residency program directors and site chiefs at university-affiliated anesthesia departments*. *Canadian journal of anaesthesia*. 62(9): 964-971.

4. Bould MD , Sutherland S , Sydor DT , Naik V , Friedman Z. (2015). *In reply: A view from the middle of the totem pole*. *Canadian journal of anaesthesia*.

5. Bould MD , Sutherland S , Sydor DT , Naik V , Friedman Z. (2015). *Residents’ reluctance to challenge negative hierarchy in the operating room: a qualitative study*. *Canadian journal of anaesthesia*. 62(6): 576-86.

6. You-Ten KE , Bould MD , Friedman Z , Riem N , Sydor D , Boet S. (2015). *Cricothyrotomy training increases adherence to the ASA difficult airway algorithm in a simulated crisis: a randomized controlled trial*. *Canadian journal of anaesthesia*. 62(5): 485-94.

Research

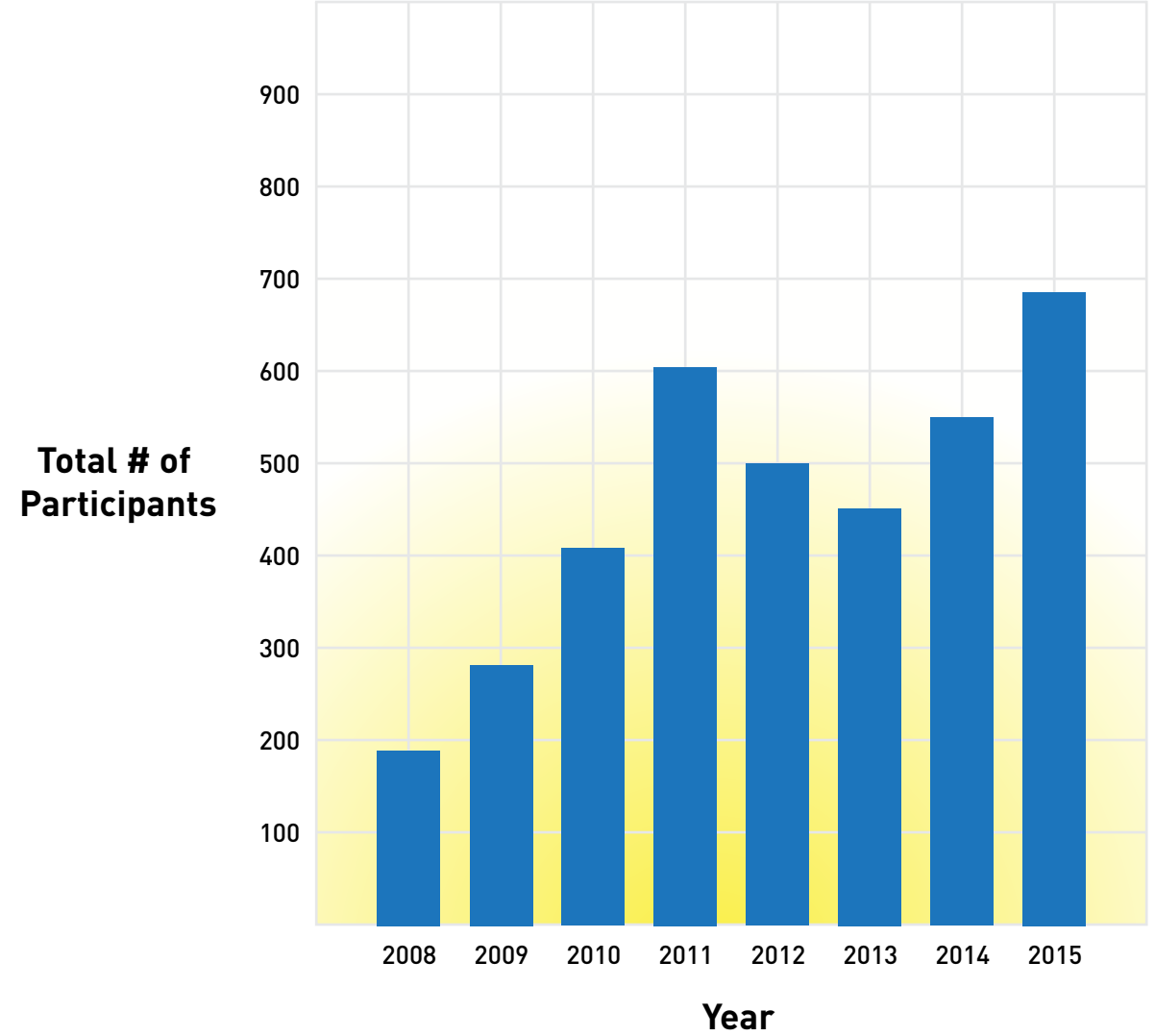
- Dr. Cavalcanti:** Ultrasound guided central line and collaboration skills.
- Dr. Friedman:** Power and conflict: the effect of a superior’s interpersonal behaviour on trainees’ ability to challenge authority during a simulated airway emergency.
- Dr. Khanduja:** Resident’s ability to react to a simulated stressful environment
- Dr. Dedy Non-technical performance in simulated crisis scenarios among a junior resident population

Volunteers

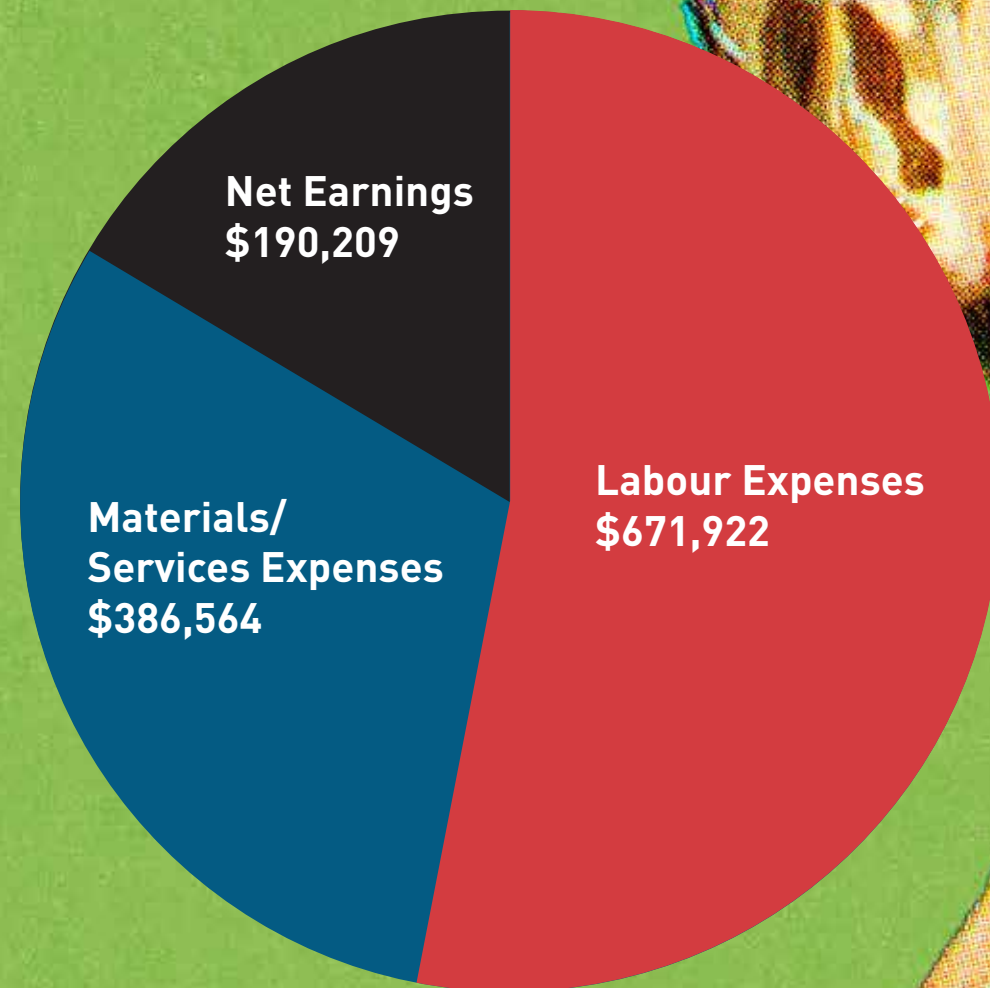
The SimSinai Centre is seeing an increase in usage every year and only has one simulation technician. In 2015, it was decided that it would be helpful to have some extra hands on deck.

We would like to thank our two volunteers, Victoria McIntyre and Kyra Lynn Chu for all of their hard work and commitment.

ACLS



Financial Summary



Revenue
\$1,248,694

PRAISE

Lisa,

I really want to thank all of your staff for assisting last week Friday and Sunday during the Dr. Janik course set up and tear down.

The level of support and professionalism your team provides is very much appreciated and always makes these workshops run so smoothly.

Thanks again, and we look forward to growing this very successful partnership with the Mt. Sinai Surgical Skills Centre.

Steven Starnas,
Karl Storz Endoscopy

Dear Lisa,

Thank you very much for "making it happen." I am very grateful to you, as I know will be all of our participants, for your support. You and your staff have always shown an exceptional level of commitment and professionalism to all of the courses that we have shared with you.

Please accept my deepest appreciation.

Kindest personal regards,
Peter A. Adamson, MD, FRCSC, FACS

Hi,

Just wanted to say a big thanks to everyone involved with the CAEP, EDTU event that occurred this weekend. Both days went off without a hitch all because of everyone's contribution especially Dezan who worked both days and Marina and Kris for their help on Saturday and Sunday. As per usual, any change that was requested to a station set up was met with a 'no problem'. The CAEP Physician Lead, Dr. Mark Mensour was very impressed and is eager to make this event an annual thing. Hopefully, this event went smoothly for all of you as well.

Thanks!

Nancy

Hi Everyone,

I just wanted to send a quick note to say a massive THANK YOU for all your help and for sharing your expertise with Take Our Kid to Work Day 2015.

It was a huge success and from the feedback from the kids and parents, they really enjoyed themselves and felt they all learned something interesting and new.

Well done again to everyone involved and thank you for another successful year!

Have a lovely weekend!

Kindest Regards,
Denise

Dear Jason,

This past week we had another one of our soft tissue workshops at your Mount Sinai Surgical Skills Laboratory. As always, you and your staff took excellent care of all of us, faculty and residents. From all accounts it was a successful and appreciated event for our residents.

We all recognize that this could not happen without your dedicated and superb assistance. Everyone is always helpful and efficient, and everyone assists our efforts with a smile even though it is late in the day.

On behalf of our Department, our Division, our faculty, our residents and myself personally, please accept my deepest appreciation for your excellent work. Would you please pass along my appreciation and kindest regards to Dezan, Massih and Lisa and all who assisted us that evening.

With kindest regards,

Peter A. Adamson, MD, FRCSC, FACS
Professor and Head
Division of Facial Plastic and Reconstructive Surgery
Department of Otolaryngology – Head and Neck Surgery
University of Toronto

Hello Jason!

I'm extremely sorry for this late email, but I would like to say thank you on behalf of all of us from Friends of MSF for your donation! With your help we managed to raise up to \$700 for MSF Canada. The money will be going towards all the amazing work they do all around the world. We will most likely have another workshop next March and we would certainly love your support for that event as well.

Again, thank you so much! We would have never done with event without your support.

All the best,
Alisa Dermawan

Chapter Representative - Friends of MSF

Hi Shunne and Lisa,

Just wanted to let you know what a success the lab was again this year.

Once again, your staff out did themselves.

I can honestly say that we don't do another lab each year that is as well organized, prepared and thorough as the SSC lab.

Your staff makes it a real pleasure to be involved with this event.

Dezan, Marina, Jason and Finch were just amazing.

Thanks so much for another great year.

I just wanted to take the time to acknowledge your wonderful staff.

Have a great weekend.

James

James Cartan
Distributor for Linvatec and Breg
Downtown Toronto & GTA North Territory

Supporters

It is with heartfelt gratitude that the Surgical Skills centre acknowledges all of its incredible supporters. Their contributions in support of surgical education allow the Surgical Skills Centre to remain at the forefront of our endeavours. The resources provided by our sponsors, where it is financial support, donations of extra supplies or the lending of equipment, allows us to provide an unmatched teaching experience for all of our learners. Special thanks to Mount Sinai's Operating Room and Departments!

An anatomical model of the human thoracic cavity. The lungs are large, reddish-brown, and have a textured, lobulated surface. The heart is visible in the center, with its major blood vessels (aorta and pulmonary artery) extending upwards. The model is made of a material that looks like plastic or wax, with realistic colors and textures.

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