



# ATSSL Annual Report 2020-21



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# 2020-21 HIGHLIGHTS

165  
Sessions

5480  
Learner  
Encounters

1207  
Session  
Hours

60  
User Groups

10  
Staff

\$1,111,598  
Operating  
Budget

# ABOUT THE ATSSL

The ATSSL is a state-of-the-art facility that allows medical trainees and practicing professionals the opportunity to acquire, practice and develop their skills in a safe learning environment. The facility opened in 2014 and offers a full complement of simulation modalities from human and cadaveric tissue procedural skills to theatre-based simulation for all learners in pre-licensure and licensed health professional education at the University of Calgary (UCalgary) and Alberta Health Services (AHS). This includes medical students, postgraduate medical residents, practicing physicians, nursing students, nurses, and allied health professionals. In 2018, the ATSSL was granted accreditation as a Simulation Program by the Royal College of Physicians and Surgeons of Canada.

The ATSSL is comprised of three separate labs: Surgical Skills Laboratory (SSL), Clinical Skills Laboratory (CSL), and Special Procedures Laboratory (SPL). The 30,000+ square foot, state-of-the-art facility, can accommodate small and large groups of learners simultaneously, in parallel streams. The ATSSL also manages the UCalgary Body Donation Program (BDP), which coordinates the acceptance and preparation of generously donated bodies for medical education and research.

The ATSSL strives to fulfill its commitment to provide innovative and interdisciplinary simulation-based medical education (SBME) while improving outcomes of patient safety and quality of care. This is achieved by working with education and quality improvement partners at the UCalgary Cumming School of Medicine (CSM) and AHS to develop longitudinal curricula and address identified training priorities. The focus is on skills and knowledge acquisition, interprofessional training and teamwork, and a better understanding of patient safety threats, which results in more effective, confident, and safe medical and surgical professionals. ATSSL operations are integral to the CSM Mission of “Creating the Future of Health”.

## VISION

**Global leader in innovative simulated education and assessment for health professionals to improve patient outcomes.**



## MISSION

**Design and facilitate individual and team-based simulation education for an inclusive community of diverse learners, offering a full complement of simulation modalities in a safe environment.**

**Effective design of appropriate quality simulation activities, incorporating a cost-effective, evidence-based approach.**

**Support research and scholarship into simulated education and assessment activities.**

# GOVERNANCE & ORGANIZATIONAL STRUCTURE

The ATSSL is governed by the Executive Steering Committee, which establishes the strategic direction and is the decision-making body of all operations and programming supported by the ATSSL. These responsibilities include facilitation of collaborations between ATSSL, AHS, other Ucalgary faculties and external stakeholders in SBME.

The ATSSL Medical Director, Associate Medical Director, and Operations Manager report to the CSM Senior Associate Dean, Education.

## Executive Steering Committee

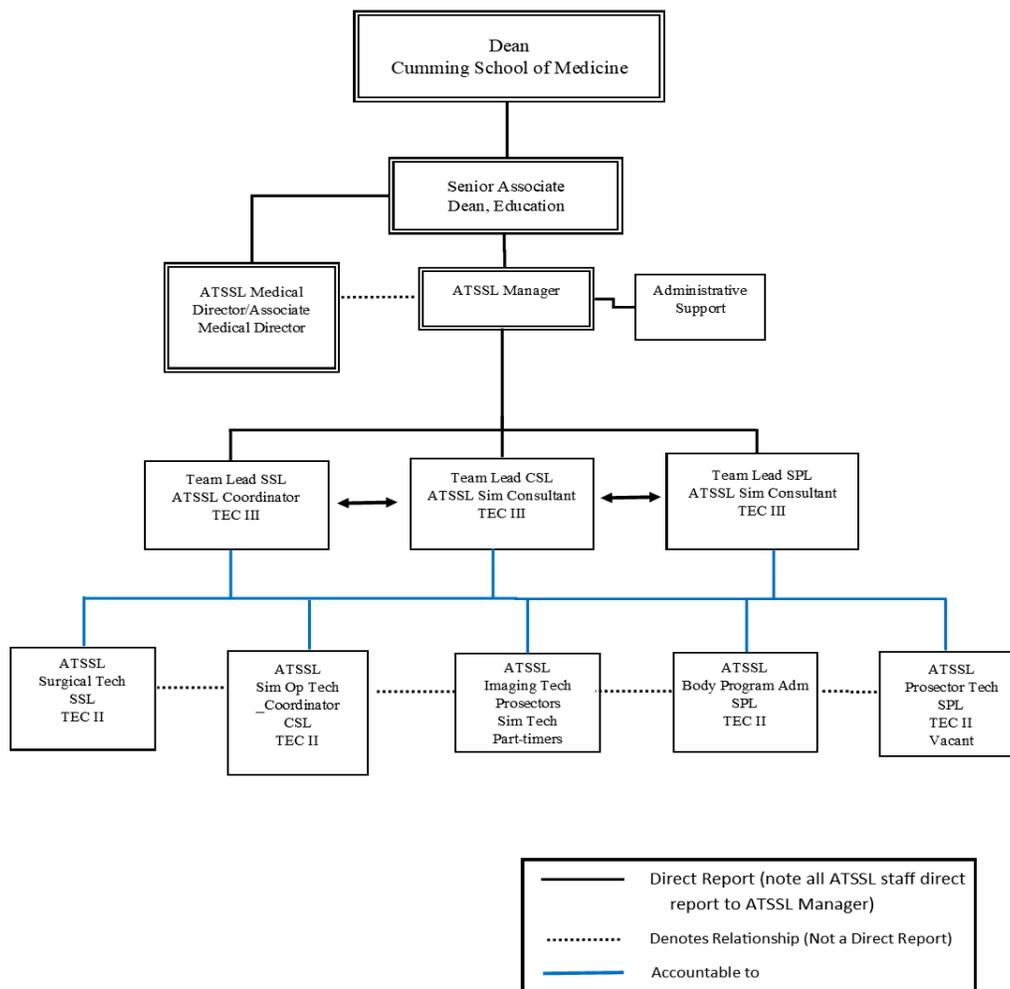
Dr. Beverly Adams, Senior Assoc Dean Education, CSM

Rose Yu, Senior Director, CSM

Dr. Chandrew Rajakumar, Medical Director, ATSSL

Dr. John Kortbeek, Associate Medical Director, ATSSL

George Mulvey, Operations Manager, ATSSL



## **MEDICAL DIRECTOR (since 2021)**

**Dr. Chandrew Rajakumar MD FRCSC** joined the ATSSL in January 2021 as the Medical Director and is currently Division Head for Minimally Invasive Gynecologic Surgery at the University of Calgary; President of the Section of OBGYN for the Alberta Medical Association; Provincial Lead for Benign Gynecology for ERAS Alberta; and a Simulation Lead for the Dept. of OBGYN, CSM

## **ASSOCIATE MEDICAL DIRECTOR (Since 2021)**

**Dr. John Kortbeek MD FRCSC FACS** joined the ATSSL in January 2021 and is currently a Professor with the Departments of Surgery, Anesthesia and Critical Care, University of Calgary and Alberta Health Services. Dr. Kortbeek has served as regional Trauma Services Director for Calgary, as Director of the Intensive Care unit at the Foothills Medical Centre, Site Chief of Surgery at Foothills and as Chairman of the Department of Surgery for the University of Calgary & AHS.

## **MANAGER (since 2014)**

**George Mulvey** is responsible for overseeing all aspects of ATSSL including managing the human and physical resources, operational planning, financial management and reporting, compliance with Occupational Health and Safety, Biosafety and Medicolegal Standards, as well as monitoring, summarizing and communicating operations of the ATSSL with stakeholders.

## **COORDINATOR (since 2014)**

**Heather Hill** schedules, coordinates, oversees the preparation of, and manages the execution of activities in the laboratories. She collaboratively facilitates the design of simulation experiences to provide positive outcomes in patient safety, quality improvement, and cost containment. She has created unique training models, consistently used to develop learners' procedural skill mastery.

## **SIMULATION CONSULTANT (since 2015)**

**Irina Charania** practiced as a Registered Respiratory Therapist at Foothills Medical Centre before joining the ATSSL. She provides clinical and academic leadership to the simulation program; coordinates, develops, prepares and executes simulation activities. She offers expertise in the field of interprofessional and interdisciplinary medical education.

## **SIMULATION CONSULTANT (since 2016)**

**Michèle Cowan** provides technology support to facilitate communication and optimize processes for data management. She collaborates on national and international educational projects to facilitate the development of quality medical referral education and postgraduate medical simulation curriculum.

## **SIMULATION TECHNICIAN (since 2014)**

**Stephanie Jaunin** oversees the operational design, policies, planning and support for the SSL. She upholds the day-to-day setup, maintenance and repair of the facility. She has developed and created hybridizing cadaveric animal tissues with dry models to improve fidelity. She has been instrumental in the improvements of the cadaveric standard operating procedures.

## **SIMULATION TECHNICIAN (since 2019)**

**Chris Bergeron** provides daily support for the CSL. He prepares high-fidelity manikins and task trainers for SBME sessions, schedules and coordinates sessions, and provides technical support to users. He previously worked for the Faculty of Veterinary Medicine as both an anatomy technician and pathology technician.

## **BODY DONATION PROGRAM ADMINISTRATOR (since 2020)**

**Jaime Cowie** provides professional administration of the CSM Body Donation Program. She handles donated cadaveric specimens for the purposes of embalming and preparing for use in medical educational programs, and organizes the internment ceremony every two years.

## **TECHNICAL CONSULTANT (since 2013)**

**Dan Dupperon** provides direct technical support and expert counsel on all aspects of maintenance, technology and programming of components or interfaces used to support SBME and equipment.

## **ADMINISTRATIVE ASSISTANT (since 2019)**

**Kevin Weir** coordinates the administrative and reception functions of the ATSSL, providing administrative support for the ATSSL Manager and Medical Director, and some additional administrative support to the Body Donation Program and audiovisual support to the ATSSL team.

## **CONSULTANT (since 2017)**

**Gretchen Greer** works with the ATSSL on an ad hoc basis contributing to the annual report, accreditation, and other projects as required. Her primary role in the CSM involves education quality improvement and scholarship.

## DR MARCIA CLARK'S DEPARTURE AS ATSSL MEDICAL DIRECTOR

The ATSSL bids our former Medical Director, Dr. Marcia Clark, a fond farewell. Since 2015, Dr. Clark has played a significant role in change, adaptation, and ultimately improvement of simulation curricula locally, nationally, and internationally. Dr. Clark was instrumental in the ATSSL joining over 20 accredited national and international simulation centres, in the receipt of accreditation as a Simulation Program of the Royal College of Physicians & Surgeons of Canada (RCPSC) in 2018.

While Dr. Clark is stepping down from her role as the ATSSL Medical Director, she remains a prominent part of the UCalgary simulation-based learning community. Dr. Clark continues to hold a UCalgary clinical faculty appointment and is the Vice-Chair of Surgical Foundations at the Royal College of Physicians and Surgeons of Canada (RCPSC) helping to frame and implement Competency-Based Medical Education in Surgery across Canada.

On behalf of the Cumming School of Medicine (CSM) Dr. Beverly Adams, Senior Associate Dean Education, is pleased to announce the appointment of Dr. Chandrew Rajakumar MD, FRCSC, as Medical Director and Dr. John Kortbeek, MD, FRCSC FACS, as Associate Medical Director of the Advanced Technical Skills Simulation Laboratory (ATSSL). The appointments are effective January 1, 2021.

As Director and Associate Director, Drs Rajakumar and Kortbeek will provide medical leadership and strategic advice for the educational programming of the ATSSL grounded in inter-professional practice competencies, quality and patient safety, oversee RCPSC Simulation Program accreditation and lead change in the adoption of simulation across the continuum of medical education integral to the CSM Mission of "Creating the Future of Health".

Dr. Rajakumar brings over 5 years of experience producing educational programs for UME, PGME and CME. In addition, he is a regularly invited simulation lead at the University of British Columbia's Advanced Technical Skills Course as well as the endoscopic suturing courses both nationally (SOGC) and internationally (AAGL). Dr. Rajakumar is also the education lead nationally (CanSAGE) for fellowships in Minimally Invasive Gynecologic Surgery.

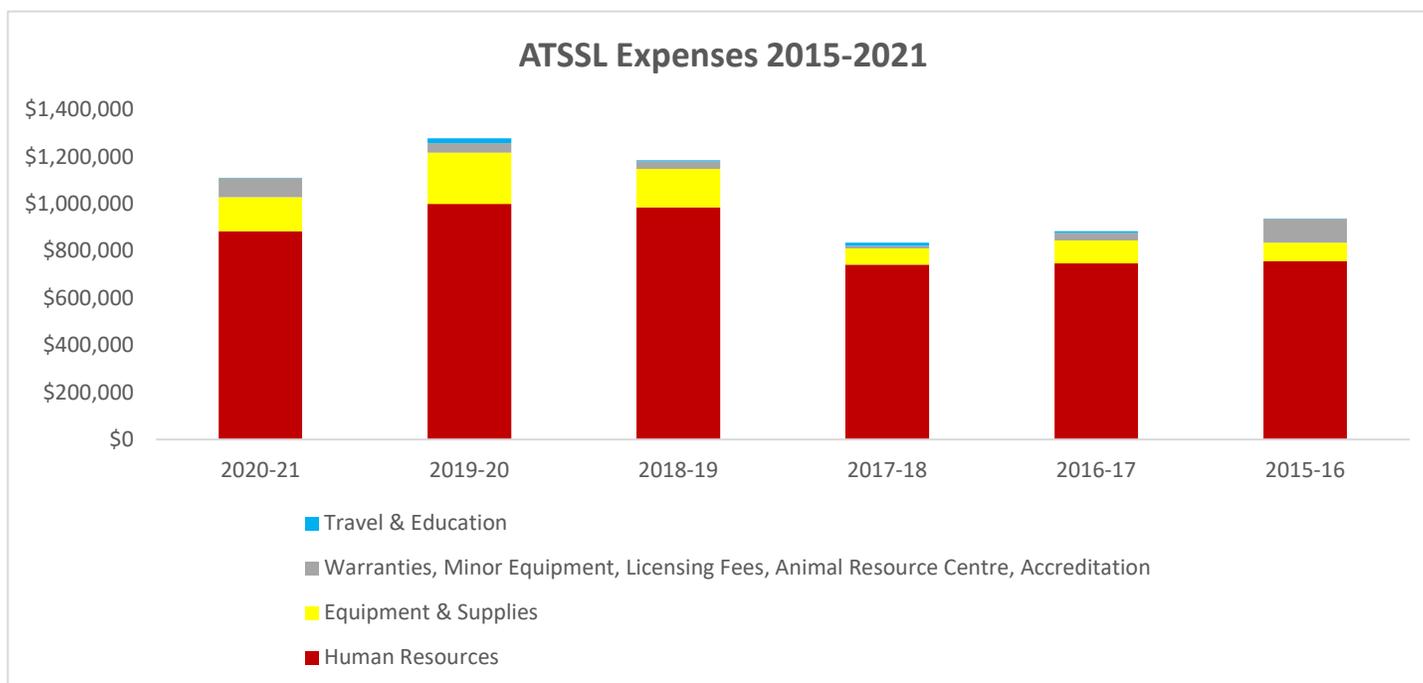
Dr. Kortbeek has been an active member of many surgical and trauma organizations and editorial boards and has authored many books and publications. Dr. Kortbeek previously served as President of the Trauma Association of Canada, as Chair of the Advanced Trauma Life Support subcommittee of the American College of Surgeons' Committee on Trauma, as a Governor for the American College of Surgeons and as a Director of the Shock Trauma Air Rescue Society in Canada.

Please join us in welcoming Dr. Rajakumar and Dr. Kortbeek to their new roles.

# FINANCIAL REPORT

The ATSSL is funded by the CSM and by revenue from external users and industry-sponsored symposiums. The CSM provided an operating budget of \$968,302, and external revenue generated in the current and previous fiscal years provided the remaining \$223,305 to cover total expenses of \$1,111,598. Funds are utilized for staffing, equipment, materials supplies, warranties, and preventive maintenance. The centre had a favourable budget variance of \$139,744 due to staff reductions associated with the COVID-19 pandemic. Overall, expenses have increased over the past years due to operations related to the Southern Alberta Body Donation Program which amalgamated with the ATSSL in 2018-19.

Learners from the core educational programs at UCalgary including Undergraduate Medical Education (UME), Postgraduate Medical Education (PGME), Bachelor of Health Sciences (BHSc), Graduate Science Education (GSE), as well as members of AHS clinical departments and programs are classified as 'internal users' and are not charged for access to the ATSSL. Internal users however are charged for supplies and disposable and limited use items such as the lumbar puncture simulator replacement skins. Learners identified as external and industry clients are charged on a cost-recovery basis under a fee structure determined by the ATSSL Executive Steering Committee. External revenue is retained in a separate UCalgary IRNA account and used to support additional equipment maintenance/refurbishment and replacement as well as educational opportunities, including conference travel for staff.



# ATSSL FACILITIES & PROGRAMS

The ATSSL facilities are located in two connected buildings on the UCalgary Foothills Campus: the Surgical Skills Laboratory is in the Health Research Innovation Centre (HRIC) and the Clinical Skills Laboratory and Special Procedures Laboratory are in the Health Sciences Centre (HSC). The ATSSL has two dedicated classrooms in the HRIC capable of accommodating up to 30 learners each. Classroom features: wireless internet access, lecture podium with laptop connections, LCD projector and in-ceiling speakers, videoconference and remote viewing capability.

## SURGICAL SKILLS LABORATORY (SSL)

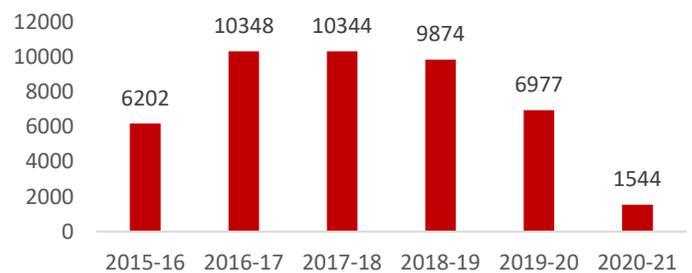
The SSL is where a variety of surgical skills are practiced by diverse groups of medical health professionals. The space includes 20 simulated operating room stations fully equipped with scrub sinks, surgical beds and tables, overhead OR lighting, dual-LED monitors and ceiling supply units. Four of the stations are specially outfitted with in-light cameras that allow real-time imaging to be remotely displayed throughout the lab and classrooms. The SSL is designed to be multifunctional and offers a variety of configurations to accommodate any group size. The area can be used as one large space or divided into two to four smaller spaces allowing for multiple education sessions to occur at once. The ATSSL is focused on user safety and is equipped with a fully functional reprocessing area to clean and sterilize instruments onsite.



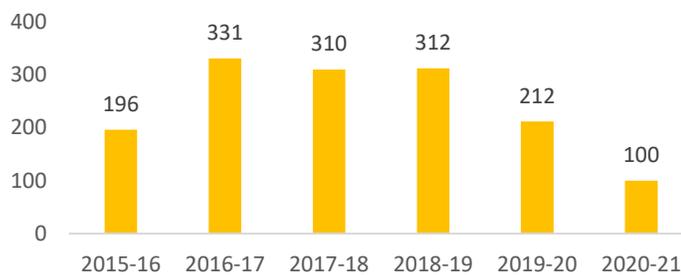
In 2020-21, the SSL hosted **100 sessions** comprised of **1,544 learner encounters**. It should be noted that for every 1 hour of active lab session time (**376 hours in 2020-21**), approximately 3 hours of ATSSL operating staff hours are required to ensure that quality of design, preparation, implementation and facilitation of sessions are maintained.



### SSL Learner Encounters



### SSL Sessions



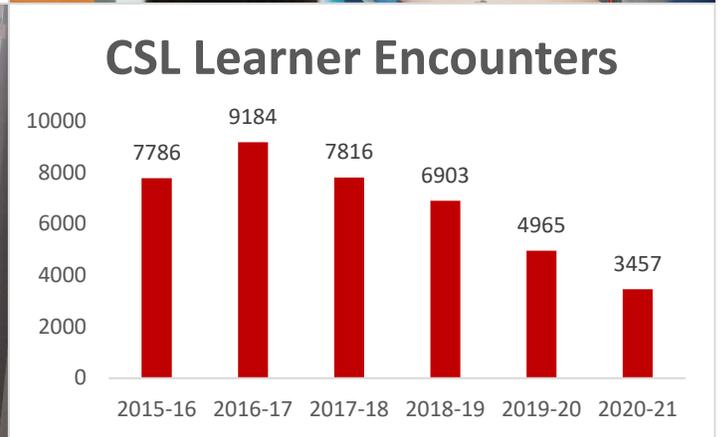
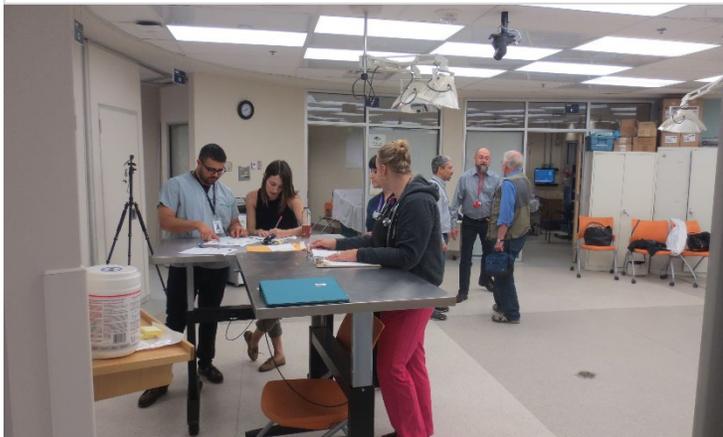
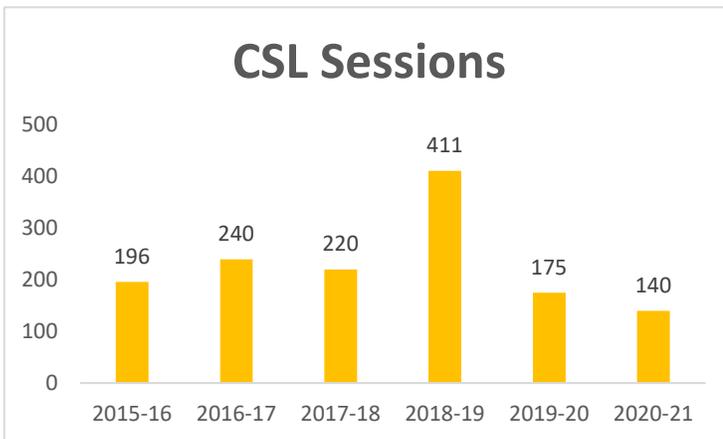
# CLINICAL SKILLS LABORATORY (CSL)



The CSL is a multi-disciplinary, modular, medical simulation facility where learners use simulators to enhance technical skills, patient safety and learner safety. Simulators are tools that include a variety of task trainers, computerized manikins, and standardized patients. Using a variety of simulation resources from custom developed task trainers, learners are able to engage in experiential learning opportunities intended to foster knowledge consolidation and reflection.

The CSL has the capacity to accommodate 80 learners at any one time, allowing for numerous groups to work independently within functional spaces permitting private debriefing or conference-like presentations. This includes 4 dedicated simulation suites with control rooms and a large modular space that can be sub-divided into 8 separate pods with a capacity for up to 12-15 learners in each.

In 2020-21, the CSL hosted **140 sessions** comprised of **3,457 learners**. Similar to the SSL, every 1 hour of active lab session time (**749 hours in 2020-21**) requires approximately 3 hours of ATSSL operating staff hours to ensure that the quality of design, preparation, implementation and facilitation of sessions are continuously upheld.



## SPECIAL PROCEDURES LABORATORY (SPL)

The SPL provides a unique environment for SBME with an emphasis on anatomical sciences, including developmental biology, gross anatomy, and neurobiology. The primary focus is medical education in the structure and function of the human body using preserved, embalmed and plastinated cadaveric prosections, plastic models and a 3D atlas. The lab includes a large area dedicated as a gross anatomy teaching laboratory, cadaver procurement and preparation facility. The SPL has space to accommodate small groups of up to 30 to observe demonstrations and practice procedures.

The SPL experience is available to staff, residents, medical students with specialty groups granted select access. The lab allows learners to develop their dissection skills as it relates to their surgical and clinical practices. SPL promotes the development of both procedural skills and the conceptual understanding of human anatomy.

Gross Anatomy review sessions are offered and delivered by qualified anatomists using prosected human cadavers. This invaluable experience allows learners to review musculoskeletal, cranial and visceral anatomy pertinent to their curriculum. This learning experience can only occur due to the generosity of the individuals and their families who have donated their bodies through the UCalgary Body Donation Program. All Anatomical donations are provided with the utmost dignity and respect.

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## UCALGARY BODY DONATION PROGRAM

The UCalgary Body Donation Program (BDP) remained open during the COVID-19 pandemic by implementing the ATSSL Job Safety Plan and Workplace Safety Plan and continued to receive donors, perform prosections and accommodate learners. Additionally, COVID-19 cadaveric testing was implemented in collaboration with Alberta Precision Laboratories — a first in Canada.

The learning experiences in the SSL can only occur due to the generosity of the individuals and their families who have donated their bodies. The UCalgary BDP coordinates the acceptance and preparation of donated bodies for the purposes of medical education and research. The generosity of Albertans wishing to leave a legacy following their death through the donation of their bodies is greatly appreciated and contributes to the education and ongoing professional development of healthcare practitioners. Donations facilitate the development of proficient clinical skills and surgical techniques providing an experience beyond task trainers and manikins.

Historically the BDP accepts 60-70 donors per year. Currently, there are over 10,000 individuals registered with the program having indicated their [intent to donate](#). All donors are provided with the utmost dignity and respect and we actively teach and practice empathy for all anatomical donations. Every two years, the CSM organizes a graveside commemorative service for the family members and friends of those who have chosen to donate their bodies for medical study. The location of the burial site for the cremated remains is located in Queen's Park Cemetery.

For more information, visit: <https://cumming.ucalgary.ca/body-donation-program>



# COVID-19 RESPONSE

In response to the COVID-19 pandemic last March 2020, the ATSSL created its own [COVID-19 Adaptation Guidelines and Rules](#), and, in collaboration with the CSM and UCalgary Environment, Health and Safety, designed and implemented a [Job Safety Plan and Workplace Safety Plan](#) allowing learners to continue accessing simulation safely.

**STAY SAFE DURING YOUR SIMULATION**  
**DO NOT ATTEND IF YOU HAVE ANY COVID-19 SYMPTOMS**

**Physical Distancing**  
Space between all attendees is critical to reduce the spread of infectious diseases.  
2 m or 6 ft  
Limit the number of facilitators & participants in the space at a time  
Maintain 2m distancing; brief simulation exchanges are an exception  
Do not bring personal items into the space, if not required for the activity

**COVID-19 ADAPTATIONS**  
**ATSSL** Designs for simulation curricula with appropriate protection

**Ensuring Cleanliness**  
Cleaning and disinfecting high-touch and/or shared surfaces.  
Increase frequency of cleaning of all occupied spaces  
IPC approved hand-surface disinfectants to be used on all touch-points  
Communal items must be easily cleaned

**Efficiency & Cost**  
Design curriculum to ensure safety for all. Be efficient, prudent and practical with consideration of simulation budgets.  
Limit # of participants; may require additional sessions  
Book appropriate time between groups to allow for disinfection of space and equipment  
Only use essential equipment to limit setup and use of trainers

**WASH HANDS FREQUENTLY**  
**USE HAND SANITIZER AFTER EACH SIM OR HANDLING OF ANY ITEMS**

Sources of information:  
• [AHS Personal Protective Equipment](#)  
• [COVID-19 - Infection Prevention and Control](#)  
• [Reference Guide for Simulation in Simulation - SIMS 2020-2021](#)  
• [Infection Prevention and Control \(IPC\) - Infection Prevention and Control](#)  
<https://cumming.ucalgary.ca/atssl/>  
ATSSL

**stay safe during your simulation**

**ATSSL** Advanced Technical Skills Simulation Laboratory  
**UNIVERSITY OF CALGARY**

With COVID-19 in our community it's important to design a simulation curriculum with appropriate protection. **ATSSL COVID ADAPTATION GUIDELINES** give you the security to help keep you safe during your simulation activities and reduce any risk of infection.

**ATSSL COVID ADAPTATION GUIDELINES**

These guidelines have been developed to support ATSSL in reducing the risk and transmission of COVID-19 among learners, facilitators and employees. This document outlines the criteria that should be addressed in simulation curriculum development in response to the COVID pandemic. All users are expected to review and implement these guidelines to their simulation design prior to booking the activity in the ATSSL. All bookings will be considered on a case-by-case basis. The guidelines set forth are subject to change at anytime as a result of recommendations from the Cumming School of Medicine (CSM), Infection Prevention and Control (IPC) and/or Alberta Health Services (AHS), as well as PPE limitations, or at the discretion of the ATSSL staff.

**DO NOT COME TO THE ATSSL**  
**IF YOU ARE SICK OR HAVE ANY SYMPTOMS OF COVID-19**

## PERSONAL PROTECTIVE EQUIPMENT (PPE) TRAINING SESSIONS

In mid-2020, in collaboration with the Office of Continuing Medical Education and Professional Development (CME&PD) and infection prevention and control (IPC) professionals from AHS, the ATSSL helped develop and provided timely [PPE training](#), preparing healthcare providers to care for patients who require droplet and contact isolation on medical admission units in Calgary Zone.

With the generous support of Dr. Ghazwan Altabbaa, MD, a clinical associate professor in the Department of Medicine, the ATSSL offered a refresher training course on proper donning and doffing of PPE. Over 450 healthcare professionals received the course between April to May of 2020, and were specifically coached on “how to think deliberately about what steps are needed to stay safe from the start to finish of a patient encounter.”

## ALBERTA E-VENT

ATSSL simulation consultants worked with the Life Sciences Innovation Hub and Exergy to test and develop a ventilator inspired by an open-source emergency ventilator from MIT. Now called the [Alberta E-Vent](#), or “Bertie”, it was put through validation tests in the CSL space.

Irina Charania explains, “The final design automates breath delivery from a manual resuscitator, meeting a patient’s needs and freeing up a respiratory therapist, and it can be set for volume of air, inspiratory time, rate, and positive end expiratory pressure.”

Using the ATSSL’s precision instruments to simulate lung functions, respiratory therapists went about testing the ventilator in scenarios much like those found in hospitals.

# USER EXPERIENCE

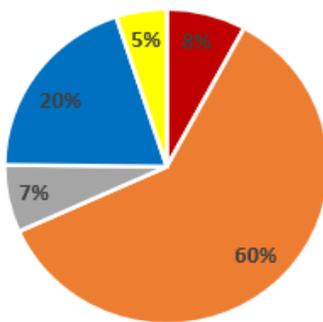
## USAGE BY PROGRAM

In 2020-21, the ATSSL hosted a total of **240 sessions** (42% in the SSL, 58% in the CSL) with an additional **25 sessions** in the SPL. This included **5,001 learner encounters** (31% in the SSL, 69% in the CSL). Although the number of sessions and learners has decreased from previous years due to COVID-19, the ATSSL was able to adapt to continuously offer safe learning sessions throughout the pandemic.

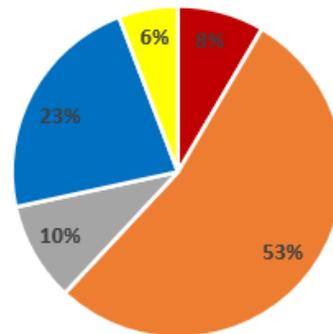
**Session hours in the CSL and SSL totalled 1,124**, and for every 1 hour of active lab session time, approximately 3 hours of ATSSL operating staff hours are required to ensure high quality of design, preparation, implementation and facilitation of sessions are continuously upheld to assure alignment with the [ATSSL's Vision and Mission](#). The resource requirements for the research planning, development and evaluation of activities/sessions in the ATSSL are not aggregated into the activity report hours.

The majority of the sessions and learning encounters in the CSL were from the PGME and UME programs, while the SSL hosted mostly sessions with the PGME and Externals/Industry. This reduction in SSL UME learners was due to the transition of UME to online learning during the pandemic. The SSL and CSL were able to continue with reduced operations under the ATSSL COVID-19 Job Safety Plan and Workplace Safety Plan.

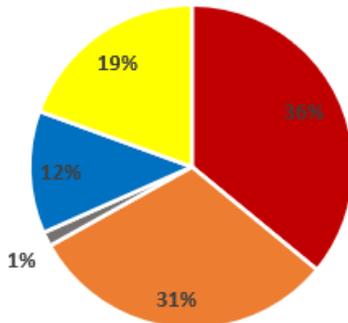
### SSL Sessions



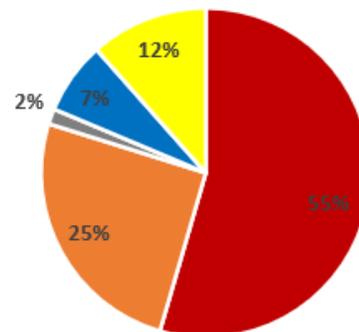
### SSL Learner Encounters



### CSL Sessions



### CSL Learner Encounters



■ UME   ■ PGME   ■ Other UCalgary   ■ External & Industry   ■ AHS

Other users of the labs in 2020-21 included CSM programs such as the Indigenous Health Program, Innovation 4 Health, and the Alberta International Medical Graduates program. Users external to the CSM included the Southern Alberta Organ & Tissue Donation Program, Student Run Simulation Team, Mount Royal University, SAIT, Makami College, Robertson College, National Acute Critical Events Simulation, as well as industry.

# CONTINUOUS QUALITY IMPROVEMENT

## RCPSC ACCREDITATION

As an accredited Simulation Program of the Royal College of Physicians & Surgeons of Canada (RCPSC) since 2018, the ATSSL is required to demonstrate adherence to standards within the following domains: mission statement and governance, infrastructure, education, research, and patient safety and the healthcare system. This is a voluntary process, and the ATSSL joins over 20 other accredited national and international simulation labs that are recognized as leaders in SBME.

As part of the five-year cycle, the ATSSL is required to provide interim reports to the RCPSC regarding accreditation standards for which partial (rather than full) adherence was achieved during the accreditation review. Although full adherence to all 31 standards is not required in order to maintain accreditation, continuous quality improvement is considered to be a cornerstone of the accreditation process. The ATSSL provided a required interim report response to the RCPSC in May 2020 on 11 standards that were classified as "partially adherent", and RCPSC responded in August 2020. Based on this update, the RCPSC granted full adherence to one additional standard, and the ATSSL is now fully adherent for 21 standards, and partially adherent for the remaining 10 with the next interim report due in May 2022. In addition, the renewal accreditation application is due in November 2022.

"[The RCPSC] are pleased to note that the reviewer's recommendations have been implemented reflecting the Program's support of the accreditation goals of best practices in simulation-based education. It is clear that the Program has been working very hard to improving the quality of its accreditation policies and procedures."

- Royal College of Physicians & Surgeons  
of Canada, August 2020

## FACETS PROGRAM

The ATSSL partners with the RCPSC to offer a customized Facilitator Education Training in Simulation (FACETS) course to those associated with a UCalgary Postgraduate Medical Education or Continuing Medical Education & Professional Development. The training, which is grounded in medical education theory, introduces current healthcare providers and educators to the foundational principles of SBME. The delivery of the theoretical foundation of the course is through the RCPSC Simulation Educator Training pre-course (pre-SET) eLearning modules. This allows the in-person workshop time to be fully dedicated to the discussion of theoretical principles and their contextual application as part of specific projects.

A cohort of Psychiatry and Physical Medicine & Rehabilitation (PMR) began their training in Nov 2020. The first session in November was virtual and the January session was in person. A dry run of the scenarios/curriculum developed in this previous session is planned for July 2021, with a full program run starting in Sept 2021.

## COURSE EVALUATIONS

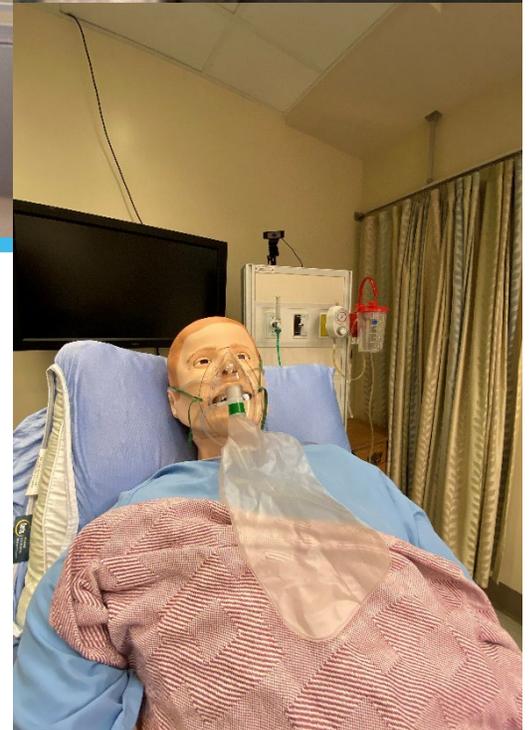
The ATSSL reviews individual course evaluations as part of its CQI process. The ATSSL online generic course evaluation is sent out to all users who do not administer their own evaluation. If they identify as administering their own evaluation, the ATSSL Administrator follows up and requests a summary evaluation of the course. The ATSSL staff review course evaluations, specifically looking for the alignment between evaluation results and session objectives. Courses developed in collaboration with the ATSSL are regularly updated when evaluation results indicate that intended objectives have not been completely addressed, and changes have predominantly been made in teaching approaches and content. No evaluation data to date has been identified which would warrant a change to objectives.

## SIMCAPTURE VIDEO SYSTEM

As of February 2021, the ATSSL has a SimCapture video system available to users. Found in the CSL, this SimCapture system allows effective management, recording, and assessment of simulation training, both on-site and in-situ. With synchronized capture of multiple camera angles and the ability to record audio, users can ensure complete coverage of their simulation events.

SimCapture can also be controlled by mobile devices to record sessions and manage debriefings. Through a web-based interface, users can annotate videos from the simulation including patient monitors, medical devices (EKG, Ultrasound, EMR), and simulator data.

Thanks to this secure, mobile-friendly, and cloud-based system, the ATSSL can now offer events to distance learners.



# EVENTS & INITIATIVES

## EVENTS

### **Advanced Surgical Skills for Exposure in Trauma (ASSET) 2021**

This one-day cadaver-based course follows a modular, body region approach focusing on five key anatomic areas: neck, chest, abdomen and pelvis, and upper and lower extremities. Each section begins with a short, case-based overview, followed by hands-on exposure performed by students under the guidance of faculty. The student-to-faculty ratio is low, allowing extensive faculty guidance and interaction with students. The students assess their ability to perform each exposure independently and are evaluated on knowledge and technical skills. The 8-hour course was delivered to 20 PGY-5(+) residents and fellows in general surgery, trauma, critical care, thoracic surgery, cardiac surgery, vascular surgery, plastic surgery, otolaryngology, and pediatric surgery. The feedback was very positive.

## INITIATIVES

### **Quality Referral (QuRE) Commitment**

The ATSSL provides ongoing support to the [QuRE workshop development and deployment](#) to improve the quality of the consultation/referral process. The QuRE Working Group aims to provide practical resources for physicians and surgeons to improve the clarity and timeliness of consultation/referral requests and responses. The QuRE Working Group, a collaboration between AHS, the UCalgary and the University of Alberta (UofA), identified key components of a quality consultation and referral. A two-sided pocket checklist card was developed as a reference tool, providing best-evidence criteria for both the requesting and responding physicians. This checklist card has been trialled and tested by family physicians and consultants/specialists, and modified based on feedback. It has since been the focus of educational materials, workshops and scientific presentations provincially, nationally and internationally.



### **Calgary Interprofessional Health Education Collaborative**

The Calgary Interprofessional Health Education Collaborative is responsible for actively collaborating to develop and strengthen interprofessional education (IPE) opportunities for undergraduate students in health care related faculties in educational institutions in Calgary. ATSSL Simulation Consultant, Irina Charania, has been an active member since its inception and commits approximately 10 hours per month of consultant time to participate with the committee, relevant IPE simulation curriculum development initiatives, and working groups. She has contributed to the development of 39 courses and simulations since 2018.

## Greg's Wings

The ATSSL has continued its active involvement in the Greg's Wings Teamwork Training project. ATSSL Simulation Consultant Irina Charania has taken on this role and, in collaboration with the rest of the Greg's Wings team — Drs Kristin Fraser, Ward Flemons, Ian Wishart, and the Price Family, has developed the Teamwork Training 201 Train-the-Trainer Workshop.



This workshop was piloted in June 2019 in Red Deer, Alberta. Attendees represented a cross-section of healthcare education and quality improvement professionals from a variety of educational institutions (UCalgary, Red Deer College, UofA, Northern Alberta Institute of Technology) and AHS. Since the initial pilot, the workshop has been delivered an additional 4 times (3 in Calgary, and 1 in Lethbridge). Following the workshop, participants collaborate with Irina in the development of training programs integrating the Greg's Wings teamwork training tools and materials in situationally appropriate ways. Programs currently under development are focusing on Transitions in Patient Care (AHS Primary Care Initiative), Teamwork and Advocacy training as part of Residency Orientation (UCalgary PGME), teamwork training for primary care clinics as part of Family Medicine Residency (UCalgary), and Primary Care Network Teamwork training (Lethbridge Mosaic PCN). Irina has also helped with the integration of Greg's Wings materials in the UCalgary PGME Patient Safety and Quality Improvement Workshops, and was an invited co-facilitator in the December 2019 and May 2020 offerings.

## RESEARCH & SCHOLARSHIP

ATSSL strives to adhere to best practices through engagement in research and development in the field of SBME. It is an RCPSC accreditation requirement that “the program be engaged in, and contribute to, the larger community of research in health professions education that advances the field”. This is achieved by initiating research internally, much of which is generated via Simulation Consultants and the Medical Director. However, the ATSSL also supports and informs the research generated by external researchers.

All researcher requests are required to complete the [Booking Request Form](#). Specific requirements are reviewed by the ATSSL and if deemed appropriate, requests may be put forth to the ATSSL Education Sub-Committee. All research is reviewed by the UCalgary Conjoint Health Research Ethics Board. The following are research studies that involved the ATSSL in 2020-21 include:

Research Study	Primary Investigator	Research Dates
EDU RAPID US-Guided Femoral Nerve Block Training Session	Andrew McRae	2018-2020
Quantifying In Vivo Cervical Spine Kinematics and the Influence of Cervical Total Disc Arthroplasty	Ganesh Swami	2018-2020
In vivo cadaveric analysis of volar tilt correction using a kickstand screw technique in volar plate fixation for distal radius fractures	Peter Longino	2019-2020
Enhancing Longitudinal Analysis of Advanced Bone Imaging and Finite Element Predicted Bone Strength	Steven K. Boyd	2020
Dual fluoroscopy for in-vivo analysis of the 3D kinematics of cervical and lumbar degeneration	G. Swamy	2019
Establishing an Imaging Protocol for Dynamic Computed Tomography Scans of the Trapeziometacarpal Joint	Sarah Manske	2020-2022
The Effect of Fiber Wire on Tendon Strength and Attenuation: A Cadaveric Study	Justin Yeung	2020
Evaluation of PPE Course	Ghazwan Altabbaa	2020

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