



ATSSL Annual Report 2021-22

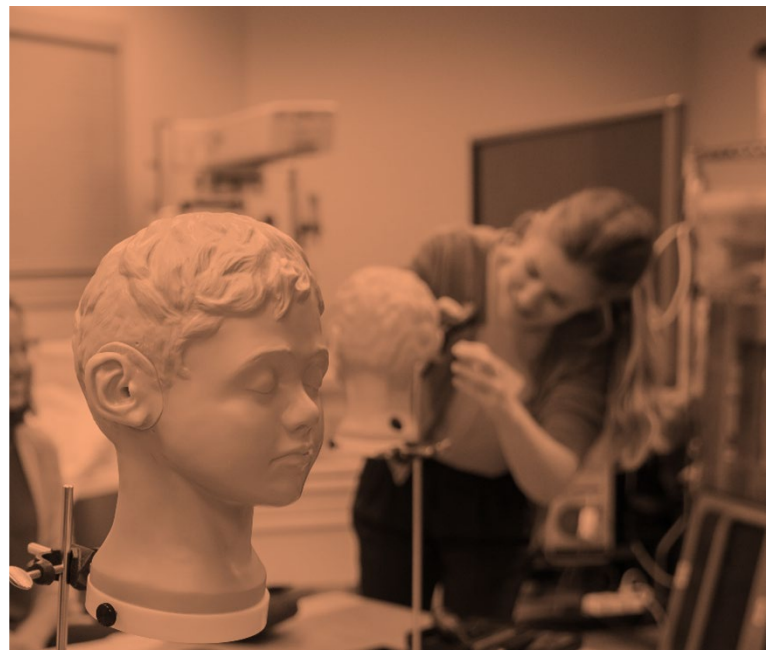


TABLE OF CONTENTS

2	2021-22 HIGHLIGHTS
3	ABOUT THE ATSSL
4	GOVERNANCE & ORGANIZATIONAL STRUCTURE
5	ATSSL TEAM
6	FINANCIAL REPORT
7	ATSSL FACILITIES & PROGRAMS
	SURGICAL SKILLS SIMULATION LABORATORY
	CLINICAL SKILLS SIMULATION LABORATORY
	SPECIAL PROCEDURES LABORATORY
	BODY DONATION PROGRAM
10	USER EXPERIENCE
	OVERALL USAGE
	USAGE BY LEARNER GROUPS
	COVID-19 RESPONSE
	USER FEEDBACK
13	CONTINUOUS QUALITY IMPROVEMENT
14	EVENTS, INITIATIVES & RESEARCH

2021-22 HIGHLIGHTS



387 Sessions



12 Staff



1,714

Sessions Hours



5,142

Staff Hours



**8,730 Learner
Encounters**



**\$1,218,862
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 theater-based simulation for all learners in pre-licensure and licensed health professional education in 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 from the Royal College of Physicians and Surgeons of Canada and will undergo its next review in 2023.

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

The ATSSL fulfills its commitment to provide innovative and interdisciplinary simulation-based medical education, while improving outcomes of patient safety and quality of care. This is achieved by working with education and quality improvement partners in 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 team work, 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

The ATSSL is committed to providing innovative and interprofessional simulation-based medical education.

We continuously aim to produce effective, confident and safe medical and surgical professionals while improving patient safety and quality of care.

GOALS

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 simulation-based education and assessment activities.

Maintain a high visibility, excellent reputation validated through retention of full accreditation.

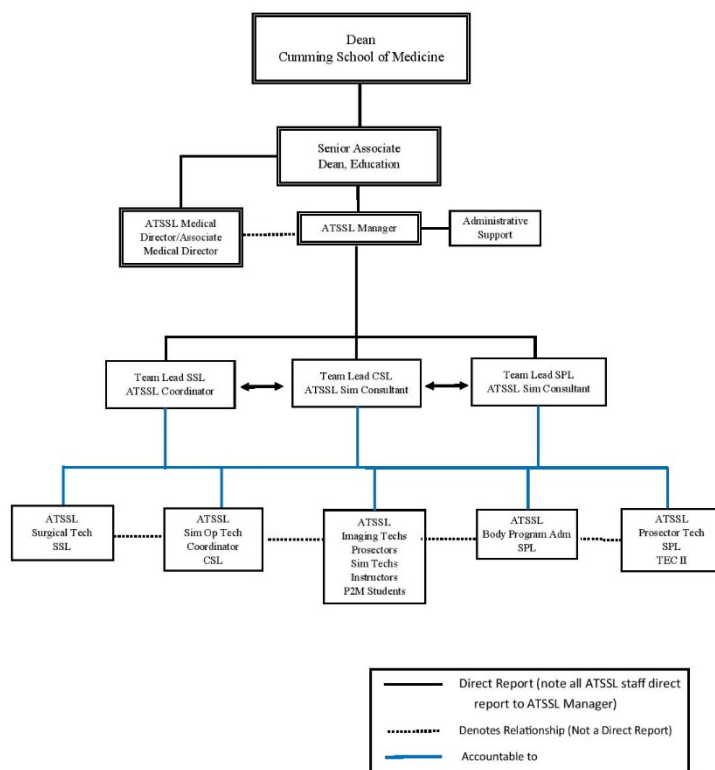
GOVERNANCE & ORGANIZATIONAL STRUCTURE

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

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

The ATSSL Education Review Sub-Committee reports to the Executive Steering Committee and is responsible for planning, strategizing, and implementing educational aspects of the ATSSL. The committee meets quarterly, and members are appointed by the organizations/departments they represent. Specific duties include ensuring that simulation events are aligned with ATSSL vision, mission, and goals; monitoring the quality of education activities; identifying opportunities for scholarship; and contributing to accreditation standards and documentation.

Organizational Structure



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

Education Review Sub-Committee

Chair:

Dr. Chandrew Rajakumar, ATSSL Medical Director or
Dr. John Kortbeek, ATSSL Associate Medical Director

Members:

George Mulvey, ATSSL Operations Manager

Heather Hill, ATSSL Coordinator

Irina Charania, ATSSL Simulation Education Consultant

Michèle Cowan, ATSSL Simulation Education Consultant

Dr. Sarah McQuillan, Obstetrics & Gynecology

Dr. Ghazwan Altabbaa, Medicine

Dr. Catherine Patocka, Emergency Medicine

Dr. Steve Lopushinsky, Surgery

Dr. Vincent Grant, Pediatrics & Emergency Medicine

Dr. Sarah Weeks, Cardiac Sciences

Ad Hoc Membership:

eSIM Provincial Simulation Program

Office of Health & Medical Education Scholarship
W21C

Research Faculty

Simulation Fellows/Directors from other Programs

ATSSL TEAM

<p>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 Department of Obstetrics & Gynecology.</p>	<p>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. 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 Chair of the Department of Surgery.</p>
<p>OPERATIONS 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.</p>	<p>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.</p>
<p>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, and coordinates, develops, prepares and executes simulation activities. She offers expertise in the field of interprofessional and interdisciplinary medical education.</p>	<p>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.</p>
<p>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, and has been instrumental in the improvements of the cadaveric standard operating procedures</p>	<p>SIMULATION TECHNICIAN (since 2019) Chris Bergeron provides daily support for the clinical simulation lab. He prepares high fidelity manikins and task trainers for simulation-based educational 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.</p>
<p>BODY DONATION PROGRAM ADMINISTRATOR (since 2020) Jamie 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.</p>	<p>TECHNICAL CONSULTANT (since 2013) Dan Duperron provides direct technical support and expert counsel on all aspects of maintenance, technology and programming of components or interfaces used to support simulation-based education and equipment.</p>
<p>ADMINISTRATIVE ASSISTANT (2019-2021) Kevin Weir coordinated the administrative and reception functions of the ATSSL, provided 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.</p>	<p>Prosector Preparator Program Technician (since 2022) Stephanie Sellan joined the ATSSL in 2022 as the Prosector Preparator Program Technician. She is an Athletic Therapist with a strong background in human anatomy. Stephanie provides day-to-day support for the Special Procedures Lab as well as the Surgical Skills Lab managing, coordinating and preparing cadaveric specimens for medical educational sessions.</p>

FINANCIAL REPORT

The ATSSL is jointly funded by the CSM and by revenue from external users and industry-sponsored symposiums. The CSM provided an operating budget of \$964,663, and external revenue generated in the current and previous fiscal years provided the remaining \$254,199 to cover total expenses of \$1,208,348. Funds are utilized for staffing, equipment, materials supplies, warranties and preventive maintenance. The centre had a favourable budget variance of \$10,514 due to continued 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 separate UCalgary IRNA account and used to support additional equipment maintenance/refurbishment and replacement and educational opportunities, including conference travel for staff.

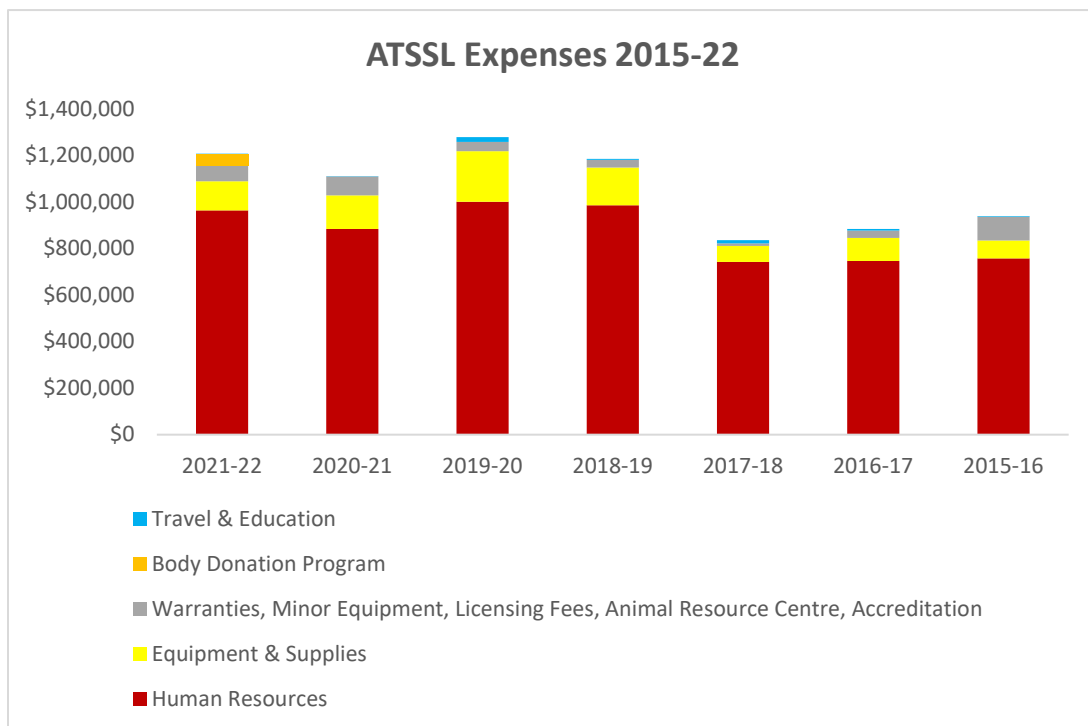
CSM Funding
\$964,663

ATSSL External Revenue
\$254,199



EXPENSES

Human Resources	\$ 963,991
Equipment & Supplies	\$ 124,582
Warranties/Minor Equipment/Licensing & Accreditation Fees	\$ 69,726
Body Donation Program	\$ 49,449
Travel & Education	\$ 600
TOTAL 2021-20 EXPENSES	\$1,208,348

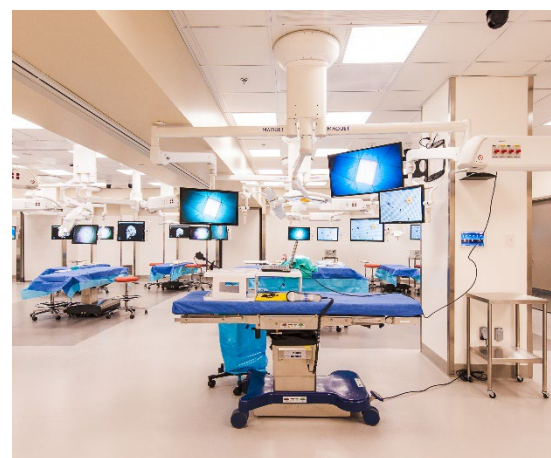


ATSSL FACILITIES & PROGRAMS

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

SURGICAL SKILLS LABORATORY (SSL)

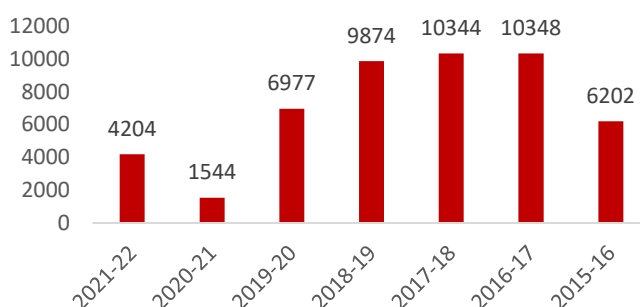
The SSL is where a variety of surgical skills are practiced by diverse groups of medical health professionals. The space includes 20 simulated operating room stations fully equipped with scrub sinks, surgical beds and tables, overhead OR lighting, dual LED monitors and ceiling supply units. Four of the 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 or 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.



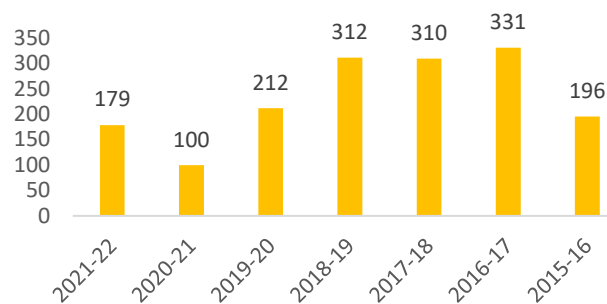
In 2021-22, the SSL hosted **179 sessions** comprised of **4,204 learner encounters**. The majority (49%) of learners were from UME, followed by PGME (32%), external and industry learners (15%), other UCalgary learners (4%), and AHS (less than 1%). For every 1 hour of active lab session time (**721 hours in 2021-22**), approximately 3 hours of ATSSL operating staff hours are required to ensure that quality of design, preparation, implementation, and facilitation of sessions are maintained.



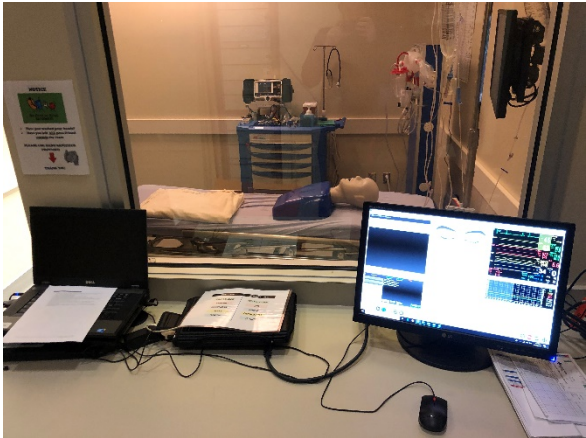
SSL Learner Encounters



SSL Sessions



CLINICAL SKILLS SIMULATION LABORATORY (CSL)

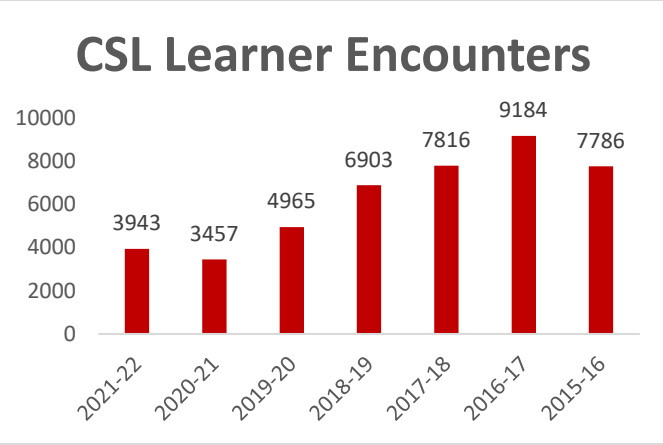
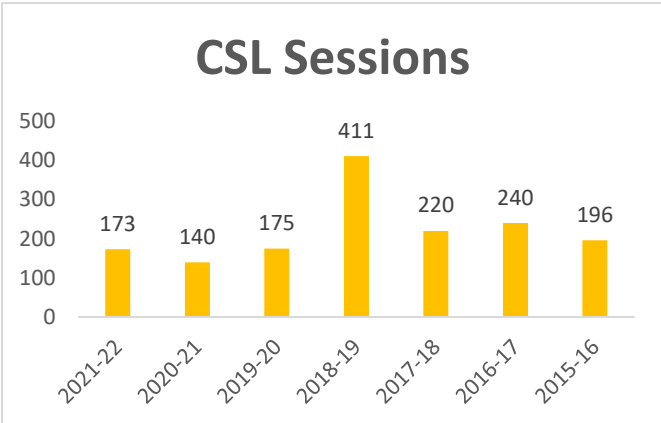


The CSL is a multi-disciplinary, modular, medical simulation facility where learners use simulators to enhance technical skills, patient safety and learner safety. Simulators are tools that include a variety of task trainers, computerized manikins, and standardized patients. Using a variety of simulation 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 60 learners at any one time, allowing for numerous groups to work independently within functional spaces permitting private debriefing or conference-like presentations. This includes 2 dedicated simulation suites with control rooms and a large

modular space that can be sub-divided into 6 separate pods with a capacity for up to 6-8 learners in each.

In 2021-22, the CSL hosted **173 sessions** comprised of **3,943 learners**. The majority (54%) of learners were from UME, followed by PGME (26%), external and industry learners (14%), other UCalgary learners (3%), and AHS (2%). Like the SSL, every 1 hour of active lab session time (**901 hours in 2021-22**) requires approximately 3 hours of ATSSL operating staff hours to ensure that quality of design, preparation, implementation and facilitation of sessions are continuously upheld.



SPECIAL PROCEDURES LABORATORY (SPL)

The SPL provides a unique environment for simulation-based medical education with an emphasis in 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, plastinated human 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 several small groups of up to 30 to observe demonstrations and practice procedures.

The SPL experience is available to staff, residents, medical students, and 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. In 2021-22, there were **583 learner encounters** in the **35 sessions** hosted for a total of **93 session hours**. The main users of the SPL were PGME (6%), UME (3%), other UCalgary learners (91%), and industry (1%).

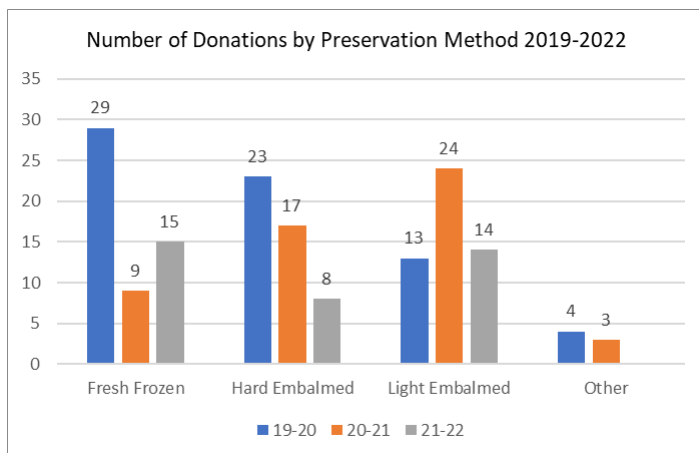
Gross Anatomy review sessions are offered and delivered by qualified anatomists using prosected human cadavers. This invaluable experience allows learners to review musculoskeletal, cranial and visceral anatomy pertinent to their curriculum. This learning experience can only occur due to the generosity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

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 and SPL 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.



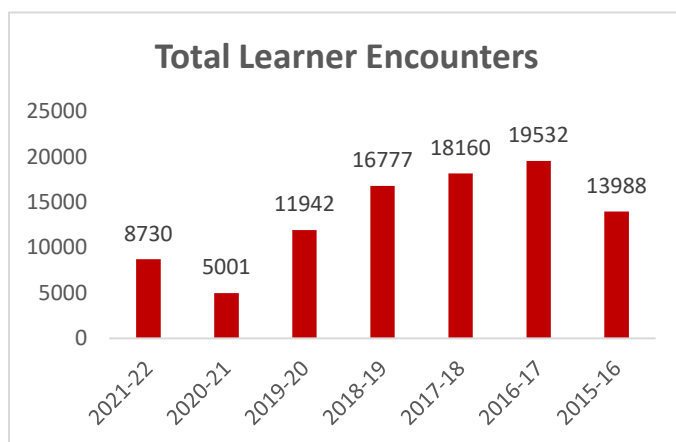
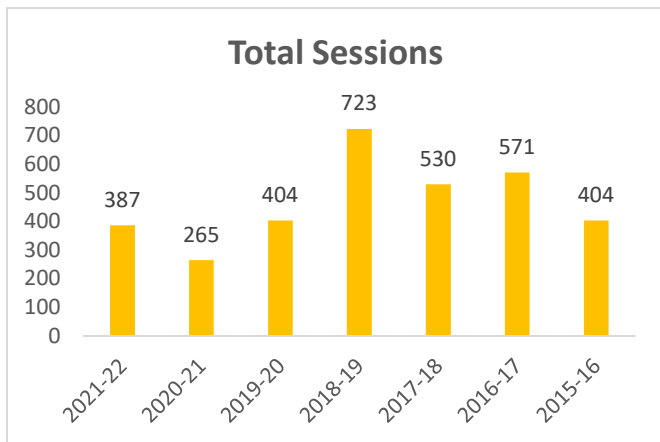
Historically the BDP accepts 60-70 donors per year. In 2021-22, 387 cadaveric sessions were hosted by the ATSSL. 76% of the sessions were for surgical simulations (101 PGME, 19 UME and 32 external organizations). 21% were for anatomy education (68 PGME, 55 UCalgary and 32 external organizations). There are over 11,000 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 burial site for the cremated remains is located in Queen's Park Cemetery.

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

USER EXPERIENCE

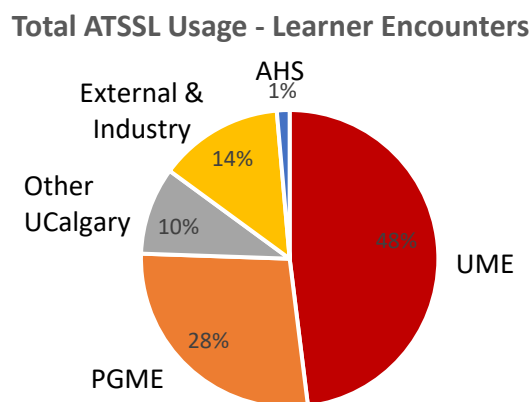
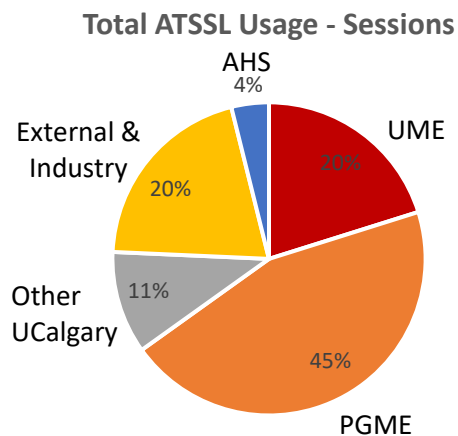
OVERALL USAGE

The ATSSL hosted a total of 387 sessions across the SSL (46%), CSL (45%) and SPL (9%) in 2021-22. This included 8,730 learner encounters (48% in the SSL, 45% in the CSL, 7% in the SPL). Although the number of sessions and learners has decreased from pre-COVID 19 levels, the ATSSL has been able to adapt to continuously offer safe learning sessions throughout the pandemic.



USAGE BY LEARNER GROUPS

The majority of the sessions were from the UME and PGME programs in both the CSL (71%) and SSL (67%). Although PGME hosted more than twice the number of sessions than UME (ie. 169 vs. 74), UME had almost twice the number of learner encounters than PGME (4,177 vs 2,367), due in part to the large class size (up to 165) in each UME session.



Other CSM users of the labs included the Alberta International Medical Graduates program and the Office of Faculty Development & Performance. Users external to the CSM included the University of Alberta, Mount Royal University, SAIT, STARS, as well as industry.

COVID-19 RESPONSE

In response to the COVID-19 pandemic, 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.

USER FEEDBACK

Learners are the reason the ATSSL exists, and their feedback is integral to continuous quality improvement. Users were surveyed for their input into this report, and provided overwhelmingly positive comments regarding the staff, operations, and the educational opportunities provided.

User groups recognized that the ATSSL consistently provides an excellent experience for learners. All mentioned the expertise and helpfulness of the staff, who have an exceptional ability to adapt the service provided to the needs of the learners and situation.

The **Internal Medicine Simulation Program** delivers the following courses at ATSSL: Simulation OSCEs, Transition to Senior Resident, and Personal Protection Equipment Simulation Training. The ATSSL provided the required simulation space, equipment, and on-site resources (safety protocols, registration, attendance sheets, coordination support for bookings and communication with our program), as well as personal protection equipment for training.

The ATSSL staff is always welcoming and supportive of our learners and respond with creative solutions to adapt to learners' feedback in terms of technology and space. One example is that we were able to continue working with standardized patients using virtual interactions during the pandemic to allow for the delivery of our Transition to Senior Resident Course.

*Ghazwan Altabbaa, MD, MSc (Clin Epi), FRCPC
Certified Healthcare Simulation Educator
Clinical Simulation Director, Rockyview Simulation IMRP*

Last year, we used the ATSSL primarily to run 2 sim sessions for our brand new **PGY1 Psychiatry residents**. As usual, it was an excellent experience and the residents were clear that they found the training to be high yield, preparing them for challenges on call. The ATSSL provides the space and expertise to deliver these critical learning opportunities in a safe space.

*Rory Sellmer, MD, FRCPC
Residency Training Director
Department of Psychiatry*



I run the **University of Calgary Bronchoscopy Course and Procedural Bootcamp** each year at the ATSSL. This is a national course for all of the pulmonary fellows (PGME) from Manitoba west. The facilities at the ATSSL are top notch and I wouldn't be able to do this without them. Heather and Stephanie are amazing - they provide much of the simulation equipment and organization of the lab. They are exceptionally helpful; hard working and great to work with.

I also run simulation sessions throughout the year using ATSSL facilities. These sessions include chest tube insertion, bronchoscopy and rigid bronchoscopy hands on sessions for pulmonary fellows. Without the ATSSL I wouldn't be able to do this. This is vital for me being able to provide the teaching required both for the **Pulmonary Medicine (PM) PGME program** as well as the **Interventional Pulmonary Medicine (IPM) PGME program**.

The ATSSL provides a state-of-the-art facility for me to provide the hands-on simulation teaching I need to do for my pulmonary and IPM programs. Without the ATSSL I wouldn't be able to fulfill the teaching requirements of these programs.

Everyone loves the ATSSL and significantly appreciate the facilities and simulation opportunities that the ATSSL provides them.

Finally, the ATSSL has recently taken over the administration of the swine rigid bronchoscopy program (live anesthetized animal) that I had been running (for the last 14 years) in the HSARC. This is crucially important for our PM and IPM programs. Without this I wouldn't be able to safely train my IPM fellows each year. I can't state how critically important this is.

I need the ATSSL in order to fulfill the educational objectives of the PGME programs I'm involved in!!

*Christopher A. Hergott MD, FRCPC, FCCP
Interventional Pulmonary Medicine Program Director
Division of Respiratory Medicine*

USER FEEDBACK

The Advanced Trauma Life Support Program (ATLS)

The Advanced Trauma Life Support course was developed over 40 years ago by the American College of Surgeons to improve and standardize trauma care to injured patients. Over the 10 revisions, it has consistently demonstrated improved outcomes for almost all types of trauma patients and is widely adopted and practiced in over 76 countries.

The ATLS program in Calgary is administered by the Foothills Elbow Trauma Education Foundation (FETEF), a non-profit society registered in Alberta. Our involvement with the ATSSL has been vital since it opened. With the onslaught of the SARS2-COVID19 Pandemic, we substantially increased our use of the facilities and the experienced technical staff. All of the learners and faculty were completely supportive of the measures instituted for the safety of participants – mainly the requirements for mask wearing, full immunizations, and restricted to small groups.



Over the past year, the Foundation has completed 11 provider courses and our first instructor course since the pandemic. The support provided by the ATSSL “Dry Lab” has been vital with facilities provided. An important innovation was the adoption of the SimMan 3G advanced simulators for the assessment part of the course and development of manikins for skill stations. These include several simulated injuries (contusions, gunshot wounds, stab wounds, and open fractures) to assist with realism.



The ATLS provider course is a mandatory course for trainees in the College of Family Physicians of Canada and many of the specialty programs of the Royal College of Physicians and Surgeons of Canada (RCPSC).

Going forward, we will adapt to the new post COVID era and have also increased our affiliation with the ATSSL by supporting the training and certification of technicians as Course Coordinators with ATLS.

*Ian B. Anderson, CD, MD, CM, FRCSC
President FETEF*

COVID-Driven Adaptations & Innovations

The pandemic required both the ATSSL and its users to adapt and innovate in order to allow learners to continue accessing simulation safely. Dr. Ian Anderson demonstrated resourcefulness by creating manikins with his own sewing machine. The ATLS skill stations used to have 2 rotations of 8 learners with one learner as the “victim/casualty” but were adapted to 4 learners and a pile of coats as the simulated casualty. The pile of coats was replaced with Dr. Anderson’s creations over the summer of 2021, and he notes that the manikins offer the benefit of allowing wound simulation applications and permitting learners to undress the casualty – things that were not previously possible with a live learner. His cat Molly has given her stamp of approval to at least one of his creations.



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 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 standards for which partial adherence was achieved during the accreditation review. Although full adherence to all 31 standards is not required to maintain accreditation, continuous quality improvement is a cornerstone of the accreditation process. The ATSSL will provide the most recent interim report response to the RCPSC in May 2022 on 10 standards that were classified as "partially adherent". The renewal accreditation application is due in November 2022, and the on-site review by the RCPSC will occur in early 2023.

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 Professional Development program. This training which is grounded in medical education theory, introduces current healthcare providers and educators to the foundational principles of simulation based medical education. 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.

Our commitment to offering customized simulation training to meet the needs of CSM community members looking to incorporate simulation into their curriculum is continuing with the development of short on-demand workshops focused on the following topics: Teamwork/IPE focused simulation; Decision making during simulation scenarios; Embedding Confederates into simulation scenarios; Simulation and Assessment; Writing Scenarios for Standardized Patients; Co-Debriefing with Standardized Patients.

COURSE EVALUATIONS

The ATSSL reviews individual course evaluations as part of its CQI process. The ATSSL on-line 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 follows up and requests a summary evaluation of the course. The ATSSL staff reviews course evaluations, specifically looking for alignment between evaluation results and session objectives. Courses developed in collaboration with ATSSL staff 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.

SIMCAPTURE VIDEO SYSTEM

ATSSL has a SimCapture video system available to users. Found in the CSL, this 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 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 & RESEARCH

EVENTS

Advanced Surgical Skills for Exposure in Trauma (ASSET)

Cadaver based reviews of anatomy and surgical exposures provide the highest fidelity opportunity for senior level surgical trainees to gain an introduction to, or experience in, life and limb threatening situations that are rarely encountered during daily surgical training. While rarely used, comfort with these skills and exposures is essential for the independent practicing surgeon.

The American College of Surgeons Advanced Surgical Skills for Exposure in Trauma (ASSET) course provides a standardized and structured, case-based, opportunity for trainees to gain these skills near the end of their training when they have the comprehension and experience to easily understand and integrate the skills taught. The advantages of the course include a very low student-to-faculty ratio, hands on practice, emphasis on interactive (rather than didactic) teaching, and direct and immediate feedback. Exposures taught include the neck, chest, abdomen, pelvis, and extremities. For each of the last three years we have had the opportunity to include 20 of our 4th or 5th year surgical residents and our surgical fellows through this valuable and high yield one day course.

The ATSSL provides the ideal location for this course. The teaching environment allows for case-based presentations, cadaver based work, and immediate interaction and discussion in one location. The facility is modern, well maintained, and fully equipped which promotes both the individual and group learning that the ASSET course strives for. The ATSSL provides and maintains the necessary high-quality equipment required for the course to be of high impact. Through the ATSSL, the course is supported by a highly skilled and professional team of personnel who effortlessly coordinate the course and allow the day to run efficiently in order to maximize student learning. The ATSSL provides an unmatched environment for this important course and trainee learning opportunity.

*Paul Cantle, MD, MBT, FRCSC, FACS
ASSET Course Director*

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 Quality Referral Evolution (QuRE)



Working Group aims to provide practical resources for physicians, surgeons and patients to improve the clarity and timeliness of consultation/referral requests and responses. The QuRE Working Group, a collaboration between Alberta Health Services, UCalgary and the University of Alberta, developed a new Patient & Caregiver journal with information and helpful questions patients can ask their doctors to help navigate the consultation/referral journey. In addition, a two-sided Checklist, residency workshop and training modules were also developed.

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. She has contributed to the development of 39 courses and simulations since 2018.

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.



Irina has also helped with the integration and facilitation of Greg's Wings materials in the University of Calgary PGME Residency Orientation, and Patient Safety and Quality Improvement Workshops. She has most recently been involved in the delivery of the workshop at the Canadian Conference on Medical Education in April 2022 which provided an overview of the collaborative efforts between the Price Family, University of Calgary, and University of Toronto teams to embed *Falling Through the Crack: Greg's Story* into the undergraduate medical education curriculums at the two schools.

RESEARCH & SCHOLARSHIP

ATSSL strives to adhere to best practices through engagement in research and development in the field of SBME. It is a Royal College 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 from the Simulation Consultants and the Medical Directors. 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 ATSSL staff 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 2021-22:

Research Project	Principal Investigator
A Comprehensive Analysis of the Novel Tubarial Glands	Dr. Lian Willetts
Dual fluoroscopy for in-vivo analysis of the 3D kinematics of cervical and lumbar degeneration	Dr. Ganesh Swamy
Enhancing Patient Care with Point of Care Ultrasound: A Pilot Study in Upper Extremity Musculoskeletal Ultrasound Teaching for Residents and Medical Students	Dr. Maleka Ramji
Establishing an Imaging Protocol for Dynamic Computed Tomography Scans of the Trapeziometacarpal Joint	Dr. Sarah Manske
Ex vivo characterization of ultrasound properties of human skull	Dr. Janet Lenore Ronsky
Evaluation of PPE Course	Dr. Ghazwan Altabbaa
In vivo cadaveric analysis of volar tilt correction using a kickstand screw technique in volar plate fixation for distal radius fractures	Dr. Peter Longino
Patient-specific 3D printed pin guides for use in the modified Harrington procedure	Dr. Michael Monument

Advanced Technical Skills Simulation Laboratory

Health Research Innovation Centre

Room BA01

3330 Hospital Drive NW

Calgary, Alberta, Canada

T2N 4N1

P: 403.220.5271

F: 403.210.9836

<https://cumming.ucalgary.ca/atssl>

@UCalgaryATSSL

The ATSSL would like to thank the following people for their feedback and contributions to this report:

Dr. Ian Anderson

Dr. Ghazwan Altabbaa

Dr. Paul Cante

Dr. Christopher Hergott

Dr. Rory Sellmer

