



Clinical Learning: The Future Is Now



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Surgeons in London, Ontario, are recognized as innovators. They are the people who have lead change in neurosurgery, orthopedics, cardiac surgery, urology, transplantation and

and learning methods have changed dramatically. Many changes have also occurred in health-care delivery systems that are affecting the ability of surgical students and practitioners to obtain adequate operative experience through current methods. The changes include medical-legal concerns, financial pressures, rapidly changing surgical technology, time constraints and increasing case complexity in academic medical centres.

In London, an idea was conceived for innovative interventional education that would improve the acquisition of skills in the form of the establishment of an interventional learning centre.

The ideal centre would be located at a site easily accessible to trainees, be versatile and “multi-use,” capable of offering diverse education opportunities to all levels of ability and promote research into education strategies. With the help of industry partners, London surgeons envisioned the creation of an interven-

teleurgery, to name a few. They are dedicated to being the best; they are curious about how to improve the way things are done; they are enthusiastic about sharing what they know. They make excellent teachers and bring out the best in others, resulting in an exponential growth of new ideas and, in the long run, better care for people.

Once again, London is on the forefront of another innovation—The Kelman Centre for Advanced Learning.

The University of Western Ontario, London Health Sciences Centre and St. Joseph’s Health Care London have been teaching surgical skills to medical students, residents, fellows and surgical practitioners for decades.

Over that period of time, surgical techniques

Frequently asked questions

What is the Kelman Centre for Advanced Learning?

The Kelman Centre is the most fully integrated surgical training facility in the world, offering a learning environment for professionals to explore new and existing interventional technologies.

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What can you tell me about the interventional skills lab?

The interventional skills lab is currently under development, but will accommodate up to 30 participants at 15 workstations equipped with open and endo/arthroscopic surgical capabilities. Using cadaveric and other inanimate models, participants will learn at their own speed.

tional learning centre as vital to the future of surgical excellence.

The opportunity to take research from the lab to the operating room would be facilitated by a surgical skills training centre where techniques

environment for health-care professionals to explore new and existing interventional technologies, the Kelman Centre is contributing to safe practices for patients through training, advancing the body of knowledge in educational research and fostering educational technology development in a multi-disciplinary environment.

Kelman is one of the most fully integrated interventional training facilities in the world. It is a versatile, multi-function facility that, through flexible design and technology, offers a variety of opportunities for surgical education, skill development and research in surgical pre-planning and surgical and interventional techniques and technologies.

The Kelman Centre for Advanced Learning is an integral part of a “living lab”—a place that encourages the continual exchange of ideas between research, development, clinical practice and learning. Advanced learning requires research-based educational methodologies.

The Kelman Centre offers a variety of learning experiences:

- practical skill development and team training in a preclinical testing and training lab,
- didactic and interactive lessons in the 3D multimedia lecture theatre,
- the help of instant feedback from surgical models in the simulator lab to refine skills and
- opportunities for telementoring post-education to refine skills.

could be practised on animal, cadavers and virtual reality or surgical simulator models before implementation in the operating room.

Leading the advanced learning revolution

The idea has now become reality with the establishment of the Kelman Centre for Advanced Learning, located at Canadian Surgical Technologies & Advanced Robotics (CSTAR) in London, Ontario.

Located in the new Legacy Research Building at the University Campus of London Health Sciences Centre, the goal of the Kelman Centre is to provide an advanced interventional skills training facility that will service the growing North American and international need for surgeons highly skilled in the latest minimally invasive technologies. By creating a learning

Frequently asked questions

What does the 3D multimedia theatre provide?

Lectures come to life as 3D projection immerses participants in live surgery and operating room situational awareness, providing views of both the operating surgeon and the surgical site inside the body. The amphitheatre design is ideal for didactic training and intimate discussions among participants, complementing hands-on experiences. Internet protocol, satellite and high bandwidth telephone technology connects the Canadian Surgical Technologies & Advanced Robotics to other leading centres.



Frequently asked questions

What does the preclinical testing and training lab offer?

Seven fully equipped training stations simulate an operating room environment, complete with surgical boom arms, lights and medical gases. Where appropriate, participants will progress from synthetic models to the full range of animated and cadaveric models.

Participants learn from expert instructors and each other in an open-concept, multiple-station environment. Fully connected and integrated video capabilities and a central, glass-walled observation desk allow scientists to observe participants and refine teaching methods to increase learning velocity.

CSTAR offers accredited continuing medical education (CME) courses accepted in Canada and the U.S. through affiliation with The University of Western Ontario.

Multiple training disciplines

The Kelman Centre is an intimate, high-tech setting for interventionalists, surgeons, medical residents and medical students. Learning opportunities cross all surgical and interventional disciplines, as well as Web-based and tele-based learning using CSTAR's Telesurgery Studio. Courses are initiated by individual surgeons, the surgical/medical departments and divisions at The University of Western Ontario.

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Discovery, development & training

During its first year of operation, Kelman has successfully completed over 30 course days represented by a variety of surgical specialties, including urology, cardiac surgery, orthopedics, otolaryngology and neurosurgery, as well as all levels of trainees from clinical clerks, residents and fellows to CME courses.

Delegates throughout Canada, the U.S. and as far away as Australia have participated in training at Kelman. From residents seeking to develop their skills to skilled surgeons seeking advanced-level training in new techniques, delegates have been awestruck by the CSTAR facility and its capabilities to deliver leading-edge education and training programs.

Based on feedback from visiting surgeons and industry representatives, Kelman has also received numerous requests to sponsor courses. And time and time again, health-care professionals are choosing The Kelman Centre for Advanced Learning as the place to train in the latest surgical and interventional advances.

Frequently asked questions

What kind of learning experiences does Kelman offer?

Kelman offers practical skill development and team training, didactic and interactive lessons, instant feedback from surgical models to help in refining skills and opportunities for telementoring post-education.



For more information, visit the CSTAR Web site at www.c-star.ca.