



**Progress Report for the Fraser Valley Regional Hospital
District re: Abbotsford Regional Centre for Health Education
and Simulation**

Fall 2018

Overview

Opened in April 2018, the Abbotsford Regional Centre for Health Education and Simulation (ARCHES) at Abbotsford Regional Hospital and Cancer Centre (ARHCC) is a state-of-the-art regional education centre that provides advanced supplementary training for medical staff to help ensure that communities in the Fraser Valley continue to receive top-level medical care.

In Canada, errors complicate over seven percent of all patient encounters, and many of these errors are attributable to errors in teamwork and communication. Simulation provides the training in which healthcare providers of various disciplines can work together to improve teamwork to improve health outcomes. This is why the Fraser Valley Health Care Foundation partnered with the Abbotsford Simulation Group, a grass roots team of doctors, nurses and respiratory therapists, to raise \$500,000 to create and build a simulation program locally in Abbotsford. The Abbotsford Simulation Group has collectively volunteered thousands of hours since January 2015 to make the program a reality. Thanks to the money raised by the foundation, these funds have provided the capital required to hire an educator, purchase life-like mannequins and equipment needed to make this idea a reality.

The ARCHES Simulation Program is designed for interdisciplinary simulation; we envision involving all departments of ARHCC and surrounding hospitals in simulation, either within the confines of the lab or in the place where staff work on a daily basis. Since its opening, the facility has hosted physicians, registered and licensed practical nurses, respiratory and physiotherapists and social workers for training sessions. In addition, basic life support training has been conducted for pharmacy and housekeeping staff at the hospital. ARCHES has also received requests from sites further east with no access to simulation (i.e. Mission Memorial Hospital, Chilliwack General Hospital and Fraser Canyon Hospital) to arrange training sessions at ARHCC. We are also expanding access to the community, as Correctional Services Canada is interested in simulating within the lab.

Completed training sessions include:

- Mock Code Blue (Cardiac Arrest/Medical Emergency) – members of the Code Blue Team (registered nurses and respiratory therapists from the Intensive Care Unit, Critical Care Unit and Emergency Room) have completed 4 Adult and 5 Pediatric sessions. These sessions included managing deteriorating patients, advanced life support for cardiac/respiratory arrest and caring for unstable patients after cardiac arrest. A total of 28 staff (Physicians, RNs and RTs) have attended these, and they will three times a month in the future.
- CPR Challenge – ARCHES has hosted 12 events, involving 82 medical and non-medical staff, who were given the opportunity to try again after feedback to build muscle memory. These staff are scored by the mannequin on their compressions and ventilations both before and after coaching, and usually scores increase by 20-30% after the session. There are multiple CPR Challenges booked weekly into 2019, and have frequent staff requests for repeated practice.

ARCHES is still in its infancy; as such, much of the energy has been directed towards completing needs assessments for staff and ensuring the lab is up and running with all the required equipment. Confirmed upcoming projects include:

- Neonatal resuscitation and managing deteriorating patients in the Neonatal Intensive Care Unit and Maternity Ward (monthly on each unit)
- Massive transfusion simulation for the Maternity Ward
- Pediatrics Deteriorating Patient sessions in Post Anaesthetic Care Room
- Mock Code Blue sessions for the Emergency Department (twice monthly), and Renal and Paediatric Units
- Paediatric deterioration and mock code blue for the Emergency Department
- Role clarity in Emergency Resuscitation Rooms for trauma and code blue (practicing new roles and leadership)
- Forensic Examination demonstration and practice
- Deteriorating patient workshops on Renal and Medicine
- CPR Challenges for all departments, as well as community care (Community Dialysis and Rehabilitation)

Overall, there is a lot of interest in ARCHES, and many more sessions will be booked in the coming weeks and months.

Current Funding Needs

Capital equipment:

- Glidescope – \$13,000
- Vascular Access Task Trainers
 - Femoral Vein– \$3,500
 - Subclavian Vein and Internal Jugular Vein vascular access task trainers – \$2,700
- Intubation task trainers (adult, pediatric, infant, neonatal and difficult airway) – \$10,000
- Mannequin (Sim Mom) – \$100,000
- CPR torsos with feedback and defibrillator capabilities – \$TBD
- Additional ResusciAnne CPR mannequin – \$8,000
- Mock medications – \$3,000
- Disposables (includes IV equipment, saline, medications, mouldage equipment, central line kits) – \$25,000 per year

Personnel costs:

- Full-time position for simulation educator (increased yearly at 0.2 FTE increments) – up to \$62,000 per year (total number for her position in a 1.0 FTE capacity is \$124,000).
- 0.2 FTE medical lead to manage and oversee the lab, teach and work to promote the simulation lab regionally – \$60,000 per year
- Specialized simulation educator training – \$1,250 + travel + accommodation
- Training of additional instructors (Simulation Learning Strategies Course) – \$600 for doctors; \$450 for allied health/nursing
- Paid instructor time to teach and promote simulation lab (these are the instructors which form the Abbotsford Simulation Group) Note: it's difficult for the simulation educator to run simulations alone (i.e. running the mannequin, actively watching and debriefing) – \$1,000/session.

It's important to keep in mind that the personnel expense is the most critical component of this program. Without leadership from a well-trained, full-time educator, and supporting staff, sustaining the program will be difficult.

Testimonials

"A huge portion of errors in the hospital are preventable by fostering good communication amongst health professionals. In the way we're trained, everyone works in their own little spheres. Learning how to communicate and work as a team isn't taught. And, that's where the Abbotsford Regional Centre for Health Education and Simulation has bridged that gap and helped improve teamwork. This is the best teaching tool out there, and it greatly benefits the hospital staff, the patients and the community at large." – Dr. Michael Yatscoff, Emergency Room Physician, Abbotsford Regional Hospital and Cancer Centre

"The great thing about having a simulation doll is that we can create an urgent environment and practice what to do in various situations without putting a real patient at risk. It's that practice that makes perfect." – Derek Vandooren, Respiratory Therapist, Abbotsford Regional Hospital and Cancer Centre

"Practice scenarios have allowed us to become more confident in treating high acuity cases. This simulation lab has made a real difference in the health care in our community." – Barbra Barwich, Registered Nurse, Abbotsford Regional Hospital and Cancer Centre

"Our reactions have become better tuned, more accurate and safer when we're faced with a real crisis in patient care because of this simulation lab, and it has greatly enhanced our ability to perform under the immense pressures that come with very difficult cases." – Dr. Phil Shaw, Emergency Room Physician, Abbotsford Regional Hospital and Cancer Centre

Media Coverage

Abbotsford News – Fake patients, real training: New lab to provide vital health care practice

Fraser Valley Health Care Foundation receives \$370,250 donation to create simulation lab

June 27, 2017

The computerized mannequins may not be real, but the lessons learned will be.

A new regional “simulation lab” – the brainchild of a group of local doctors, nurses and respiratory therapists – will give local health care workers a space to practise communication, teamwork and skills they use to treat sick patients.

This week, the Fraser Valley Health Care Foundation received a \$370,250 from the Fraser Valley Regional Hospital District to finance initial start-up costs for new lab, which will be built at Abbotsford Regional Hospital and open next March.

The aim is for the lab to be used not just by ARH staff, but by health workers and even community members from around the Fraser Valley. The lab will feature “computerized mannequins that simulate real-life scenarios,” according to the foundation.

Hospital staff already take part in training exercises, but studies have shown simulation-based procedures produce better outcomes. Emergency physician Dr. Michael Yatscoff – who was a member of the Abbotsford Simulation Group that sparked the idea – noted that around 70 per cent of “patient safety events” are due to failures of teamwork and communication.

“A huge portion of these errors are preventable by fostering good communication and improving teamwork amongst health professionals,” Yatscoff said in a press release.

While simulation training is part of many programs and provided at spots around B.C. and Canada, the simulation group found there to be a “near-total absence of simulated training at ARH and within the Fraser East region.”

The new lab is meant to address that need and create a program that is self-sustaining. The project needs another \$100,000 to reach its goal of \$500,000, which will cover the initial start-up costs and the first year of administration and operation.