Simulation Education Advisory Committee (SEAC)

PROGRESS REPORT
January 2018
University of Toronto Faculty of Medicine
Simulation Education Advisory Committee (SEAC)

Preamble

The use of simulation is becoming increasingly common in healthcare. There is a significant body of evidence that has demonstrated its value in improving: clinician performance, health outcomes (including patient safety), and system design\(^1\). There are also numerous applications of simulation technology and utilization of simulation resources to facilitate instrument development, refine technology and move the healthcare industry forward\(^2,3\).

The University of Toronto, Faculty of Medicine is uniquely poised to capitalize on its wealth of simulation expertise, access to simulation facilities and partnership with healthcare institutions.

Scope and Purpose

Historically, hospitals and health care institutions affiliated with the University of Toronto developed independently run simulation programs to serve both the needs of their hospitals and their learners. Multiple simulation centres now exist, yet often run parallel simulation activity in ‘silos’. This has contributed to confusion and in all likelihood missed opportunities with regards to delivery of efficient and effective simulation education to Faculty of Medicine learners.

The Simulation Education Advisory Committee (SEAC) was established in 2016 as a source of advice to the Vice Dean Post MD Education about the coordination and optimization of simulation expertise and resources within the Faculty of Medicine university and hospital network. A major objective of SEAC was to collate and share information about current use of simulation, resources and expertise. This would both serve to inform planning of simulation activity and contribute to an overall vision for Simulation Education in the Faculty of Medicine. SEAC includes representation from hospital simulation centres, TAHSN affiliate hospitals, the Faculty of Medicine, the Centre for Faculty Development, SIM-one, and undergraduate and postgraduate learners.

Mandate

The SEAC is tasked by the Vice Dean Post MD Education to provide advice, identify best practices, and develop guidelines and policy recommendations to:

- Create a repository of information about education simulation expertise/resources within the Faculty of Medicine university and hospital network;
- Establish a coordinated network of education simulation activity and associated scholarly work within the Faculty of Medicine university and hospital network;
- Leverage opportunity and innovation within the network to advance education simulation;
- Position the Faculty of Medicine for the future with respect to curriculum change and renewal;
- Remove barriers, streamline processes and increase access to simulation equipment and resources; and
- Promote best practices and advance quality in the use of education simulation to improve patient safety.

The SEAC reports through its Co-chairs to the Vice Dean Post MD Education who reports to the Dean via the Council of Vice-Deans Education and the Dean's Executive. The Chair submits an annual report to the Vice Dean Post MD Education.

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Process

The SEAC meets quarterly with demonstrable deliverables including: a detailed pragmatic inventory of current resources, a planned simulation symposium in January of 2018, and a planned external review in the Spring of 2018. The Phase 1 inventory of the seven largest Academic Health Sciences Centres was carried out, data collected, and analyzed in 2017 (see next section). Information was gathered on areas of expertise, physical size, resources and facilities, funding models, scope of current medical education activity, as well as scholarly/academic activity. Phase 2 of the inventory will include an inventory of simulation activity in all University of Toronto affiliated hospitals. Internationally recognized experts in education and simulation have been identified and have agreed to provide an external review on the strengths and weaknesses of U of T Faculty of Medicine Simulation in the spring 2018.
Simulation Education Advisory Committee (SEAC)

Phase I Inventory

Centres Involved

1. Centre for Addiction and Mental Health (CAMH)

2. SimSinai Centre (SimMSH)

3. CASE, The Michener Institute (CASE/UHN)

4. Surgical Skills Centre, Mt. Sinai (SSC UofT)

5. Sickkids (HSC)

6. Allan Water’s Family Simulation Program (SMH)

7. Sunnybrook (SHSC)

8. St. Michael’s
Committee

Dr. Douglas Campbell  Chair
Dr. Sal Spadafora  Associate Chair
Dr. Paolo Campisi  Surgical Departments
Dr. Peter Ferguson  Department of Surgery
Dr. Alison Freeland  Mississauga Academy Simulation Centre & TAHSNe representative
Dr. Patricia Houston  Undergraduate Medical Education
Ms. Nazanin Khodadoust  St. Michael's Hospital (SMH) Simulation Centre
Dr. Marcus Law  Community-Affiliated Hospitals
Dr. Karen Leslie  Centre for Faculty Development
Ms. Emily Louca  Hospital for Sick Children (HSC) Simulation Centre
Ms. Sasha Miles  St. Michael's Hospital (SMH) Simulation Centre
Ms. Loreta Muharuma  PGME Office
Dr. Latika Nirula  Centre for Addiction and Mental Health (CAMH) Simulation Centre
Dr. Michelle Onlock  Postgraduate Trainee
Dr. Beata Pawlowska  Centre for Faculty Development (alternate for Karen Leslie)
Dr. Sev Perelman  Mount Sinai Hospital (MSH) Simulation Centre
Dr. Linda Probyn  Postgraduate Medical Education
Mr. Aatif Qureshi  Medical Student
Dr. Ann Russell  University Health Network (UHN) Simulation Centre / Michener
Dr. Oleg Safir  Mount Sinai Hospital Surgical Skills Centre
Dr. Jordan Tarshis  Sunnybrook Health Sciences Centre (SHSC) Simulation Centre
Ms. Mary-Kay Whittaker  PGME Office
Dr. Tim Willett  SIM-One

Description of Each Site

Physical Size of Each SIM Centre excluding in situ (sq. ft)

- CAMH 450
- SimMSH 2000
- CASE/UHN 20,000
- SSC 6000
- HSC 1100
- SHSC 1800
- SMH 5800
### Facilities — SIM Rooms

#### Number SIM Rooms

<table>
<thead>
<tr>
<th>Facilitiies</th>
<th>SIM Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAMH</td>
<td>1*</td>
</tr>
<tr>
<td>CASE/UHN</td>
<td>40</td>
</tr>
<tr>
<td>SICKKIDS</td>
<td>7</td>
</tr>
<tr>
<td>SHSC</td>
<td>3</td>
</tr>
<tr>
<td>SimMSH</td>
<td>5</td>
</tr>
<tr>
<td>SSC</td>
<td>6</td>
</tr>
<tr>
<td>SMH</td>
<td>5</td>
</tr>
</tbody>
</table>

- *1 dedicated SIM room; CAMH also has 30 in situ/clinical spaces that can accommodate 2-20 people each

#### Maximum number of people in SIM rooms

<table>
<thead>
<tr>
<th>Facilitiies</th>
<th>Maximum people</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAMH</td>
<td>12*</td>
</tr>
<tr>
<td>CASE/UHN</td>
<td>250</td>
</tr>
<tr>
<td>SICKKIDS</td>
<td>80</td>
</tr>
<tr>
<td>SHSC</td>
<td>35</td>
</tr>
<tr>
<td>SimMSH</td>
<td>30</td>
</tr>
<tr>
<td>SSC</td>
<td>120</td>
</tr>
<tr>
<td>SMH</td>
<td>100</td>
</tr>
</tbody>
</table>

*continued p7*
Facilities — SIM Rooms  

Total Square Feet

- CAMH: 450
- CASE/UHN: 20000
- SICKKIDS: 1100
- SHSC: 1800
- SimMSH: 2000
- SSC: 6000
- SMH: 5800
## Facilities — SIM Rooms

<table>
<thead>
<tr>
<th>Facility</th>
<th>SIM Room Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAMH</td>
<td>• 1 dedicated SIM room; 30 in situ/clinical spaces</td>
</tr>
</tbody>
</table>
| CASE/UHN | • Debrief room, large SIM suite (1000 sq. feet)  
           • Medium SIM suite (500 sq. ft)  
           • Clinical exam rooms (OSCEs)  
           • Prep room  
           • Storage |
| SICKKIDS | • SIM centre control room  
           • High fidelity/team training room  
           • Debriefing room  
           • Procedure room hospital high fidelity room  
           • Debrief room  
           • Procedure room |
| SHSC     | • 2 action rooms (high fidelity mannequins or technical skills)  
           • 1 debriefing room |
| SimMSH   | • 1 large trauma room  
           • 2 patient mega code rooms  
           • 1 Debrief room  
           • Didactic area locker room  
           • Office  
           • Reception area |
| SSC      | • Large cadaveric wet lab  
           • Large didactic room  
           • 24 hr practice room  
           • Cadaver lab  
           • Cadaver prep room  
           • Virtual OR, (VOR)  
           • Psychomotor skills lab (PMS)  
           • Kitchen, storage  
           • Mechanical room  
           • Locker room with shower, 2 accessible washrooms  
           • 4 office areas  
           • Clean and dirty Prep areas |
| SMH      | • Skills lab (large)  
           • 2 multi-function simulation theatres with observation area behind one-way mirror  
           • 1 Multi-purpose room  
           • 1 Debriefing room |
## Personnel FTEs 2016-17

<table>
<thead>
<tr>
<th></th>
<th>Medical Director(s)</th>
<th>Research Director(s)</th>
<th>Administrative (Leadership and Administrative Staff)</th>
<th>Educators</th>
<th>Technicians Technical support staff</th>
<th>Other paid staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAMH</td>
<td>0</td>
<td>0</td>
<td>0.9</td>
<td>1.0</td>
<td>0</td>
<td>3.5 (Research Analyst 1.5, Project Scientist 1.0, Project Coordinator 1.0)</td>
</tr>
<tr>
<td>CASE/UHN</td>
<td>0</td>
<td>0</td>
<td>1.5</td>
<td>.5</td>
<td>1.0</td>
<td>0</td>
</tr>
<tr>
<td>SICKKIDS</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.3</td>
<td>1.3</td>
<td>0</td>
</tr>
<tr>
<td>SHSC</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.0</td>
<td>0</td>
</tr>
<tr>
<td>SimMSH</td>
<td>0.2</td>
<td>0</td>
<td>0.5</td>
<td>0</td>
<td>2.0</td>
<td>0</td>
</tr>
<tr>
<td>SSC</td>
<td>1.0</td>
<td>0</td>
<td>2.5</td>
<td>0</td>
<td>5</td>
<td>Roster of students, hired as needed</td>
</tr>
<tr>
<td>SMH</td>
<td>0.2</td>
<td>1.0</td>
<td>2.0</td>
<td>1.6</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>
Number of Learners, by category 2016-17

- UME: 3793
- PGME: 5017
- Paramedics, RPN, RTs, Medical Technicians, OT/PT, SW, Other: 3872
- Medical Faculty: 3861
- Nurses: 3299
## Areas of Expertise/Strength

<table>
<thead>
<tr>
<th>Area</th>
<th>Area of Expertise</th>
</tr>
</thead>
</table>
| CAMH | • Psychiatry  
       • IPE  
       • Medical-Psychiatry |
| CASE/UHN | • Respiratory Therapy, Anesthesia Assistant, Cardiovascular Perfusion, Medical Imaging (Radiological Technology, Nuclear Medicine, Ultrasound, MRI), Radiation Therapy, Chiropody  
       • Courses (BLS, ACLS, PALS, NRP) |
| SICKKIDS | • Paediatric Emergency Medicine, Paediatric Nursing, Paediatric Intensive Care, Respiratory Therapy, Resuscitation/Team Training, Mental Health, Anesthesia, Paediatric Medicine |
| SHSC | • Crisis Resource Management (multiple specialities), UME, especially Anesthesia and Emergency Medicine, Trauma Education, Surgical Skills Teaching (no cadavers or live tissue)  
       • IPE |
| SimMSH | • Various SIM modalities (from SP to Hi-Fi Simulations), SIM Centre Management, Team Training, Curriculum Development  
       • Courses (BLS, ACLS, NRP, Basic and Instructor), low to high fidelity simulation, Team Based Training, Methods of Adult Procedural Sedation (MAPS) |
| SSC | • Surgery (all surgical specialities), Emergency Medicine, UME, low to high fidelity models, Nephrology, Respirology, Ophthalmology, CME, OHNS, Obstetrics and Gynecology, Industry Events, Cardiology, Critical Care, Dentistry, Family Med, Internal Med, Anesthesia, Palliative Care, Course Development and Assessment, Radiation Certified, Cadaveric Tissue. |
| SMH | • Emergency Medicine, Obstetrics and Gynecology, Neonatology, Anesthesia, Health Disciplines Education  
       • Courses (BLS, ACLS, NRP)  
       • IPE |
Existing Collaborations with Other SIM/Educational Centres at U of T

- PGME
- UME
- CPD
- WILSON CENTRE
- SimMSH
- SSC
- SHSC
- SMH
- CAMH
- HSC
- CASE/UHN
- OTHER UofT MEDICINE
- PHYSICIAN ASSISTANT PROGRAM
- STANDARDIZED PATIENTS
- NORTH YORK GENERAL
- CREDIT VALLEY HOSPITAL
- GEORGE BROWN COLLEGE
- TRILLIUM HEALTH CENTRE
### Number of Simulation-Related Publications and Grants

<table>
<thead>
<tr>
<th></th>
<th>TOTAL</th>
<th>CAMH</th>
<th>CASE/UHN</th>
<th>SICKKIDS</th>
<th>SHSC</th>
<th>SimMSH</th>
<th>SSC</th>
<th>SMH</th>
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<tbody>
<tr>
<td>2015-16 Publications</td>
<td>28</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>4</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>2015-16 Grants</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>4</td>
<td>7</td>
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<tr>
<td>2015-16 Research related funding positions</td>
<td>3</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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</table>
**Funding Model**

1. This was highlighted as a major area of concern by all simulation programs. Only one simulation program receives dedicated base funding. All others rely on hospital operating budgets and hospital foundation dollars to operate their centres.

2. Simulation centres have an annual operating budget in the range of $250,000-$820,000; salaries represent at least 70% of operating costs. Hospital funding (including foundation) and fees (education, research, commercial use) are the main funding sources, contributing the largest percentage of operating funds. Simulation programs charge different rates to users from $50 to $425/hr, including charging university UME and PGME departments.

**What’s Next?**

1. A productive collaborative simulation network, an up-to-date inventory of actual use by network participants and a roadmap for future simulation education will inform learner education and position the University of Toronto Faculty of Medicine to be an international leader in innovation and patient safety.

2. Establish a common administrative framework to support simulation activity in the Faculty of Medicine.

3. Build research capacity within and amongst simulation programs.

4. Align with other programs and existing innovation hubs within the university and its affiliated institutions.