Executive Summary

Interior Health (IH), the University of British Columbia (UBC) Faculty of Medicine (FoM), and University of British Columbia Okanagan School of Nursing (UBCO SoN) have formed a partnership to work collaboratively in order to provide simulation education activities for undergraduate, postgraduate, practicing clinicians and physicians across UBC and Interior Health (IH).

Fiscal Year 2018-19 saw a tremendous growth across all simulation programs centres/programs where the utilization (hours) of simulation education increased 17% from 2017-18. We anticipate that these numbers will continue to grow as more requests for simulation type education for under grad, post grad, practicing clinicians and external agencies continue.

One of the main focuses for this year was to formalize facilitation and the debriefing structure and resources. Collaboration provincially created modules on facilitation and in situ readiness resources. In situ, or in the department, sessions have increased exponentially at the fixed simulation centres. Although we have been running interprofessional in situ sessions at rural hospital sites since 2009, the larger hospital sites are seeing the benefits. Through interprofessional simulation education, departments are able to review and make changes to processes, equipment, teamwork and communication and identify latent events, or potential safety threats. Many quality initiatives have been identified through in situ sessions which ultimately will improve patient safety.
Vision & Mission Statement

Vision
To support excellence in healthcare delivery through the use of simulation based education.

Mission
To facilitate simulation-based education that:
- promotes inter-professional engagement and collaboration; and
- supports highly competent providers to achieve excellence in health care delivery.
Every year the IH Rural Mobile Simulation Program facilitators come together for their Annual Simmit. In the 2018-19 year, we invited Dr. Melissa Chan and Dr. Jasmine Allaire to assist in facilitation and debriefing. Dr. Chan is the representative for BC Children's Hospital in Vancouver, for trekk.ca "Translating Emergency Knowledge for Kids". She and Dr. Allaire shared their knowledge and resources for Pediatric Emergency Medicine.

- **Simulation Facilitation Pathways** - e-learning Modules. An initiative led by Vancouver Coastal, brought simulation facilitators across British Columbia to develop nine e-learning modules on facilitation: Introduction; Learning theories; Attitudes; Pre-course; Pre-scenario; What is Debriefing; Debriefing: Blended Models; Focus on Analysis and Pitfalls. Chelsea Holmes and JoAnne Slinn took part in developing Pitfalls.

- **Pre and Post Simulation Checklist** - Helen Clugston co-created a safety checklist to minimize the impact on staffing. The checklist looks at the staffing needs, acuity, workflow, equipment, safety, infection control, confidentiality and recording.
**Emergency Nursing Association of BC Conference (ENABC)**

The ENABC executive invited simulation educators Chelsea Holmes, Jaime Gallagher, and JoAnne Slinn to present at their annual conference that was held at the British Columbia Institute of Technology (BCIT) in Vancouver. As plenary speakers, the educators presented on Simulation for Quality Improvement in the ED. In the afternoon, our educators joined with others to run pediatric and adult simulation sessions.

**2018 National Forum on Simulation for Quality & Safety**

JoAnne Slinn travelled to Toronto for the national conference to represent Kelowna General Hospital's ED in situ project, which is a shared initiative with the University of British Columbia (UBC) and Interior Health (IH). In 2015, an ED in situ simulation program at Kelowna General Hospital was instituted with multiple aims. Through this program they were able to identify latent safety threats, test new patient care protocols, find equipment issues, and foster teamwork in a sustainable way to improve the quality of care in our ED. This presentation allowed them to share the valuable work we are doing in Interior Health (IH), and gain recognition for UBC and IH in leading patient safety initiatives through simulation.

**Gateway Debriefing Skills Workshop: An Introduction to Debriefing with Good Judgement**

As part of Western Canada Health Sciences Educators Conference all IH Regional Knowledge Coordinators and our Medical Director were able to attend this workshop put on by the Center for Medical Simulation that is affiliated with Harvard University. This course provided the opportunity for participants to learn how to efficiently improve future performance, learn how to set high standards while holding high regard for the learner, treat learners as thinkers and not just doers, and practice various debriefing phases.
National Emergency Nurses Association (NENA) Conference
Chelsea Holmes, Jaime Gallagher, and JoAnne Slinn presented on Rural Simulation. They highlighted the benefits of in situ simulation and interprofessional participation, latent safety threats, facilitation, challenges and lessons learned. Pre-conference concurrent sessions were held in the Pritchard Simulation Centre, where participants could choose between Pediatric Skills practice or the Emergency Practice, Interventions and Care (EPICC) course.

Canadian Association of Emergency Physicians (CAEP) Conference
JoAnne Slinn attended the CAEP Conference and presented on “Simulation for Emergency Department Quality Improvement at Kelowna General Hospital”. She discussed the quality improvement initiative used in situ simulation as a QI tool, how they were able to identify latent safety threats, test new patient care protocols, find equipment issues, and foster teamwork in a sustainable way to improve the quality of care in our ED.

IH Rural Health Services Research Conference
JoAnne Slinn and Dr. Tara Gill did a poster presentation on our research "Does Simulation Enhance the Knowledge and Appreciation of Interior Health Pre-printed Orders (PPOs)?" They were able to share results that showed substantial improvements in comfort levels in using the Severe Adult Emergency Department Pre-printed Order (PPO), and improved confidence in the assessment and management of a severe adult asthma patient.
**Interior Health Education**

- Advanced Cardiac Life Support (ACLS)
- Advanced Trauma Life Support (ATLS)
- Acute Care of the At Risk Newborn (ACORN)
- Basic Life Support (BLS)
- Emergency Practice, Interventions and Care Canada (EPICC)
- Essentials of Critical Care Orientation (ECCO)
- In situ - simulation on various units
- International Trauma Life Support (ITLS)

**Session Total Time**

<table>
<thead>
<tr>
<th>Hours</th>
<th>FY 2017</th>
<th>FY 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1665</td>
<td>1749</td>
</tr>
<tr>
<td>1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
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</tbody>
</table>

- Mock codes
- MOREob Action to Consolidate (ACE) Days
- Neonatal Resuscitation Program (NRP)
- Nursing clinical competency simulation sessions
- Nursing specialty training
- Outreach simulation training

- Pediatric Advanced Life Support (PALS)
- Physician specialty training
- Preventing Alcohol and Risk-related Trauma in Youth (PARTY)
- Respiratory Therapy simulation sessions
- Trauma Nursing Core Course (TNCC)
Requests for in situ (in the department) simulation has seen the largest growth this year. Quality Initiatives have brought forward changes in processes, equipment, pre-printed orders, and communication to name a few. Latent events, or "near misses" are frequently identified through simulation education.

Wards where simulation education occurred:
- Ambulatory Care
- Cath Lab
- Diagnostic Imaging
- Emergency
- Intensive Care
- Neonatal Intensive Care Unit (NICU)
- Operating Room
- Pediatrics
- Post Op Recovery Room (PARR)
- Primary Care
- Safe Consumption Site
- Urgent Care
Maternity Simulation

Student Nurse Year 3

Nursing Practice with Childbearing Families (Maternity)
This specialty practicum develops beginning knowledge, skills, and abilities to provide evidence-informed nursing care in newborn family health contexts. Students engage in intentional learning opportunities in a variety of contexts: simulation, laboratory, acute and maternity care settings, self-directed online modules, and interprofessional health care teams.

Pediatric Simulation

Student Nurse Year 3

Child Health Practice (Pediatrics)
This specialty practicum develops beginning knowledge, skills, and abilities to provide evidence-informed nursing care in a variety of child health care contexts. The nursing practice experiences take place in the simulation lab, schools and in the acute care setting.

Session Total Time

UBCO School of Nursing Education

NB: In 2017, the Maternity sessions were not held, which reflect the greater number of hours in 2018.
Undergraduate
Year 1-4
- Y 2 - Transition into Clinical Practice (TICE), Ultrasound
- Y 3 - Curriculum based SIMS: Anesthesia (including Peer led & Academic Half Days), Cardiology, Emergency; Internal Medicine, Neurosurgical, Orthopedics, Pediatrics, Surgical, and Trauma, extra curricular
- Y 4 - Transition into Professional Practice (TIPP)

Postgraduate
Family Practice (FP)
Year 1 & 2
- Resident Bootcamps
- Peer-led sessions
- MD Supported SIMS
- Academic Half Days
- Advanced Cardiac Life Support (ACLS)
- Pediatric Advanced Life Support (PALS)
- Maternity SIMS
- Neonatal Resuscitation Program (NRP)
- ED in situ
- Ultrasound
- Open invitation to join other SIMS

Emergency Medicine (EM)
Year 1-5
- Monthly ED in situ
- Monthly in centre simulation
- Airway Day
- Point of Care Ultrasound (POCUS)
Awards

These awards recognize preceptors/teachers who have demonstrated excellence in teaching from the perspective of the residents.

1. Chelsea Holmes
UBC Interior Family Practice Residency Site Teaching Award.

2. JoAnne Slinn
UBC Interior Emergency Medicine Nurse Resident Education Award
Since 2016, the PSC has seen a consistent 25% growth in utilization each year.

Hours increased by 190% between 2016-17 (centre construction year) and 2017-18 (fully operational). The centre saw a 7% growth in utilization this past year.

A Regional Knowledge Coordinator (.4 FTE) was hired in September 2017. The program saw a 25% growth in utilization between 2017-18 and 2018-19.

Overall Growth

The Simulation Programs combined saw an 17% growth in utilization between 2017-2018 and 2018-19.

Simulation Hours (2018-19)

<table>
<thead>
<tr>
<th>Interior Health</th>
<th>UBC FoM (under grad)</th>
<th>UBC FoM (post grads)</th>
<th>UBCO School of Nursing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1749</td>
<td>282</td>
<td>257</td>
<td>79</td>
</tr>
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</table>
Evaluation

Fixed Simulation Centres
2018-19

Participant feedback

Strong Features
- Consolidated knowledge and identified knowledge gaps
- Very applicable to current patient in ICU
- Great to have exposure to paediatric cases and to learn practical skills in acute management scenarios

Feedback for change
- Switching roles and tasks
- More skills training would be helpful
- None, appreciate the flexibility to make SIMS what we need
- Review important SIM principles before first case; assign roles, closed loop communication, invite everyone to review things they are not confident in.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Global Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>The outlined learning objectives were met</td>
<td>4.9</td>
</tr>
<tr>
<td>This program content enhanced my knowledge</td>
<td>4.8</td>
</tr>
<tr>
<td>I was able to incorporate theory into hands-on practice</td>
<td>4.9</td>
</tr>
<tr>
<td>I feel more confident in patient management</td>
<td>4.7</td>
</tr>
<tr>
<td>This simulation encouraged me to think critically</td>
<td>4.8</td>
</tr>
<tr>
<td>I believe this session will help me improve patient outcomes</td>
<td>4.8</td>
</tr>
<tr>
<td>The debrief was valuable</td>
<td>4.9</td>
</tr>
<tr>
<td>I would like to continue to use this technology in future education</td>
<td>4.9</td>
</tr>
<tr>
<td>The facilitator(s) maintained an engaging context for learning</td>
<td>4.9</td>
</tr>
<tr>
<td>The facilitator(s) fostered a safe learning environment</td>
<td>4.9</td>
</tr>
</tbody>
</table>
### Metrics

#### IH Rural Mobile Simulation Program 2018-19

**Sites visited**

![Map of Thompson/Cariboo, Kootenay Boundary, Okanagan, and East Kootenay regions showing the sites visited.]

- **Twenty One**
  - Travel occurs in the spring and fall only.

- **Twenty Nine**
  - Number of Rural and Regional Hospital Sites in IH

- **Nineteen**
  - We have nurse/physician facilitators teams that live and travel in the four geographical areas.

**Simulation Attendance (2018-19)**

<table>
<thead>
<tr>
<th>Region</th>
<th>Thompson/Cariboo</th>
<th>Kootenay Boundary</th>
<th>Okanagan</th>
<th>East Kootenay</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Thompson/Cariboo</strong></td>
<td>119</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Kootenay Boundary</strong></td>
<td></td>
<td>57</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Okanagan</strong></td>
<td></td>
<td></td>
<td>35</td>
<td></td>
</tr>
<tr>
<td><strong>East Kootenay</strong></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>
Participants were asked what would they change in their practice

- I’m motivated to try and encourage RNs to take more leadership roles when I need to do a procedure. Will try and do a better job of empowering them to feel they can do it.
- Know the department better
- Having more confidence in approaching critical cases.
- The debriefing afterwards was super helpful and supportive. Did not feel like anyone was being singled out. The feedback was provided in a positive way (which promoted positive change).

Participants were asked what would they like to see done differently

- More simulations, more opportunities to change roles
- I actually find these sessions keep getting better so I wouldn't do anything differently

Thank you for including me in the simulator in Sparwood. It was great to be part of two scenarios, with different physician and nurse leads for each. I feel like we learned how to better use closed loop communication, challenging the leader during a crisis (not in a confrontational way, but as a way to offer constructive input), and the capabilities of the hospital for trauma management.

I look forward to implementing the communication pieces into my practice as a paramedic.

Kind Regards,
Daniel Bybee
BCEHS, Kimberley
Donor Highlights

Colin and Lois Pritchard

The Colin and Lois Pritchard Foundation has made many contributions to the Pritchard Simulation Centre in Kelowna since the build in 2011.
- 2011 - Infrastructure, SimMan3G, Harvey Simulator
- 2015 - SonoSite EDGE Ultrasound System (2)
- 2018 - Supertory (neonate) *

Interior Health Foundations

In 2016, six IH Foundations contributed to a SimMan3G that is housed at the Kootenay Boundary Regional Hospital and shared across sites.

Sindi Ahluwalia Hawkins Centre for the Southern Interior

In 2019, the BC Cancer agency donated a Glidescope & Anesthesia Machine to be used for education at the Pritchard Simulation Centre.

Rae Fawcett

Raw Fawcett has embraced education and supported the Rae Fawcett Simulation Centre by purchasing equipment since 2015.
- 2015 - SimMan3G, SimJunior, Victoria Birthing Simulator, SonoSite EDGE Ultrasound
- 2018 - Supertory (neonate) *

*Supertory is a neonate simulator that provides learners with experience in dealing with rare pediatric emergencies safely.
JoAnne Slinn has been promoting simulation by donning her t-shirt "#SIMLIFE" in local simulation sessions and through the British Columbia Simulation Network (BCSN). Twitter is lit up! @slinnjoanne
Simulation Team at Interior Health

Top Left to right: JoAnne Slinn, Helen Clugston, Chelsea Holmes