



BOARD OF DIRECTORS MEETING

Tuesday, October 2, 2018 – 12:45 to 2:15 pm
1st Floor Boardroom – Kelowna Community Health and Services Centre
505 Doyle Avenue, Kelowna

Board Members:

Doug Cochrane, Chair
 Joyce Beddow
 Patricia Dooley
 Spring Hawes
 Diane Jules
 Selena Lawrie (R)
 Dennis Rounsville
 Cindy Stewart
 Tammy Tugnum

Resource Staff:

Chris Mazurkewich, President & CEO (Ex Officio)
 Susan Brown, VP & Chief Operating Officer, Hospitals & Communities (*incoming CEO effective Oct 29, 2018*).
 Karen Bloemink, Interim VP & Chief Operating Officer, Hospitals & Communities
 Dr. Trevor Corneil, VP Population Health & Chief Medical Health Officer
 Dr. Michael Ertel, VP Medicine & Quality
 Jenn Goodwin, VP Communications and Public Engagement
 Mal Griffin, VP Human Resources & Mental Health Substance Use
 Donna Lommer, VP Support Services & Chief Financial Officer
 Norma Malanowich, VP Clinical Support Services & Chief Information Officer
 Anne-Marie Visockas, VP Health Systems Planning & Residential Services
 Dr. Harsh Hundal, Chair, Health Authority Medical Advisory Committee
 Givonna De Bruin, Corporate Director, Internal Audit
 Carmen Gudljek, Board Resource Officer (Recorder)

Presenters:

Andrew Hughes, Health Service Administrator KGH
 Tracey Rannie, Health Service Administrator, RIH

(R) Regrets (T) Teleconference (V) Videoconference

A G E N D A

ITEM		RESPONSIBLE PERSON	TIME	ATT
1.0	Call to Order			
1.1	Acknowledgement of First Nations and Traditional Territory	Director Jules	12:45 pm 4 min	■
1.2	Declaration of Conflict of Interest	Chair Cochrane	12:49 pm 2 min	■
1.3	Approval of Agenda	Chair Cochrane	12:51 pm 1 min	■◆
1.4	Approval of Consent Agenda	Chair Cochrane	12:52 pm 3 min	■◆
	1.4.1 Minutes of June 19, 2018			
1.5	Follow Up from Previous Meeting (no items for follow up)	Chair Cochrane	12:55 pm 0 min	■◆
2.0	Presentations for Information			

ITEM		RESPONSIBLE PERSON	TIME	ATT
2.1	Patient Family Centered Care	Andrew Hughes Tracey Rannie	12:55 pm 20 mins	◆
2.2	President & CEO Presentation	Chris Mazurkewich	1:15 pm 20 mins	
3.0	Items for Approval			
	None			
4.0	Committee Reports (Recommendations may be brought forward)			
4.1	Health Authority Medical Advisory Committee	Dr. Harsh Hundal	1:35 pm 5 min	■ ◆
4.2	Audit & Finance Committee	Director Rounsville	1:40 pm 5 min	■
4.3	Quality Committee	Director Stewart	1:45 pm 5 min	■
4.4	Governance & Human Resources Committee	Director Dooley	1:50 pm 5 min	■
4.5	Strategic Priorities Committee	Director Jules	1:55 pm 5 min	■
4.6	Stakeholder Relations Committee	Chair Cochrane	2:00 pm 5 min	■ ◆
5.0	Reports			
5.1	President & CEO Report	Chris Mazurkewich	2:05 pm 5 min	■ ◆
5.2	Chair Report	Board Chair	2:10 pm 5 min	■
6.0	Items for Information			
	None			
7.0	Correspondence			
7.1	Board Correspondence			■ ◆
8.0	Next Meeting: December 3, 2018			
9.0	Adjournment – 2:15 pm			



CONSENT AGENDA (Item 1.4)
Board of Directors
Regular Meeting
Tuesday, October 2, 2018

MOTION

THAT the Board of Directors approved the Consent Agenda of October 2, 2018 as presented to include approval of the following:

- Item 1.4.1: Minutes**
Board of Directors regular minutes of June 19, 2018.



**DRAFT MINUTES OF June 19, 2018
REGULAR BOARD MEETING**

2:15 – 3:30 pm

5th Floor Boardroom – 505 Doyle Avenue

Board Members:

Dr. Doug Cochrane,
Chair
Joyce Beddow
Patricia Dooley
Spring Hawes
Diane Jules
Dr. Selena Lawrie
Dennis Rounsville (R)
Cindy Stewart
Tammy Tugnum

Resource Staff:

Chris Mazurkewich, President & Chief Executive Officer (Ex Officio)
Carmen Gudljek, Board Resource Officer

Guests:

Susan Brown, VP & Chief Operating Officer, Hospitals & Communities
Dr. Mike Ertel, VP Medicine & Quality
Jenn Goodwin, VP Communications & Public Engagement
Mal Griffin, VP Human Resources
Donna Lommer, VP Support Services & Chief Financial Officer (R)
Norma Malanowich, VP, Clinical Support Services & Chief Information Officer
Anne-Marie Visockas, VP, Health System Planning, MHSU, Residential Services
Givonna De Bruin, Corporate Director, Internal Audit
Dr. Glenn Fedor, Chair, Health Authority Medical Advisory Committee (T)

Presenters:

Shelagh Turner, Executive Director, Canadian Mental Health Association (CMHA), Kelowna
Mike Gawliuk, Director of Service Delivery & Program Innovation CMHA
Roger Parsonage (interim) Executive Director Mental Health & Substance Use Services (MHSU)
Aaron Miller, Corporate Director Population Health
Heather Deegan, Director Healthy Communities

(R) Regrets (T) Teleconference (V) Videoconference

1.0 CALL TO ORDER

Chair Cochrane called the meeting to order and welcomed staff and visitors to the meeting.

1.1 Acknowledgement of the First Nations and their Territory

Chair Cochrane respectfully acknowledged that the meeting was held on the Okanagan Nation traditional territory. Director Jules offered a pray of thanks.

1.2 Approval of Agenda

Director Stewart moved, Director Jules seconded

Motion: 18-08 **MOVED AND CARRIED UNANIMOUSLY THAT** the Board of Directors approved the June 19, 2018 meeting agenda as presented.

1.3 Approval of Minutes

Director Tugnum moved, Director Beddows seconded

Motion: 18-09 **MOVED AND CARRIED UNANIMOUSLY THAT** the Board of Directors approved the minutes of the April 17, 2018 Board Meeting as presented.

1.4 Follow Up/Actions from Previous Meeting

There were no action items outstanding.

2.0 PRESENTATIONS FROM THE PUBLIC

None

3.0 PRESENTATIONS FOR INFORMATION

3.1 Integrated Youth Services Initiative (Foundry Kelowna)

Shelagh Turner and Mike Gawliuk presented. Highlights of the presentation included:

- The vision for Foundry Kelowna is to transform how youth, young adults and their families access mental health and substance use and social services within BC.
- Foundry Kelowna & Partners includes about 25 entities.
- Interior Health supports Foundry Kelowna with annualized operational funding of \$500K.
- Core Services were reviewed highlighting that these include a 5 days per week walk in service.
- Over 1000 young people have been served at Foundry Kelowna and 3000 appointments have occurred.
- Next steps include:
 - Mobile Foundry, Peer and Family Support, with additional funding for clinical support.
 - The master plan includes 25 locations across the province, the next 7 sites have been announced, one being in Penticton BC.

The presenters answered questions from the Board. Chair Cochrane acknowledged the presenters and noted that the Foundry has been a model for improving accessibility to services. Anne- Marie Visockas acknowledged the efforts of Roger Parsonage and his team who have been instrumental with Interior Health's involvement in Foundry Kelowna.

3.2 Healthy Communities – Engaging with Governments to Create Healthier Community Environments

Aaron Miller and Heather Deegan presented. Highlights of the presentation included:

- Interior Health's Healthy Communities Program (HCP) works with local governments to facilitate their engagement in health-focused interventions and the creation of healthy built environments.
- The Ministry of Health (MOH) requires that all health authorities establish a formal Partnership Agreement and then jointly develop Healthy Living Strategic Plans (HLSP) with each community.
- The Partnership Agreement is voluntary for local governments. Some local governments are actively working with IH, while others haven't signed up for a variety of reasons.
- Updates were provided on activities in Revelstoke and past activities in Princeton.
- Connections with First Nations communities – the team is working with colleagues at First Nations Health Authority (FNHA) to tap into existing systems to achieve agreements and plans.
- The Board were asked to provide advice to better engage and support stakeholder partnerships at the local and regional level – some suggestions included:
 - Include school boards
 - Develop frameworks
 - Build an inventory of wellness activities already taking place in communities
 - Tap into existing infrastructure
 - Reach out to local governments when policy documents are due for renewal
 - Consider implementing a micro-grants process (Northern Health Authority is doing some innovative work with micro-grants)

The presenters answered questions from the Board. Chair Cochrane acknowledged the presenters and the positive activities of IH's Healthy Communities Program.

4.0 COMMITTEE REPORTS

4.1 Health Authority Medical Advisory Committee (HAMAC)

Dr. Mike Ertel provided an overview of the Summary Report of the HAMAC meetings that took place on April 20 and May 18. Highlights included the following presentations:

- Violence Prevention Training for Physicians
- Kootenay Boundary Regional Hospital Orthopedic Surgical Site Infection Review
- Accreditation 2019
- Infection and Prevention Control regular report was received for information.
- Patient Portal Project update.
- Recognition of IH Physician, Dr. Anneline De Preez by the BC College of Family Physicians.

4.2 Audit and Finance Committee

Chair Cochrane reported. The committee received the following reports at their meeting on June 18:

- Major Capital Projects update
- Internal Audit Report
- IMIT Project Status update
- British Columbia Clinical & Support Services Society (BCCSS) update
- Physician Compensation Summary of Payments
- Central Deposits Update
- Audited Financial Statements for the year ending March 31, 2018 were reviewed.

Chair Cochrane requested approval of the following motion:

Director Tugnum moved, Director Beddows seconded

Motion: 18-10 **MOVED AND CARRIED UNANIMOUSLY THAT** the Board of Directors approved the Audited Financial Statements for the year ending March 31, 2018.

4.3 Quality Committee

Director Stewart reported. The committee received the following reports at their meeting on June 19:

- Pharmacy Annual Report
- Introduction to Access and Flow
- Terms of Reference

Director Stewart requested approval of the following motions:

Chair Cochrane moved, Director Hawes seconded

Motion: 18-11 **MOVED AND CARRIED UNANIMOUSLY THAT** the Board of Directors approved the BC Patient Transplant Quality Improvement and Patient Safety Committee as a Committee under s.51 (b.1) of the *Evidence Act*.

Director Lawrie moved, Director Dooley seconded

Motion: 18-12 **MOVED AND CARRIED UNANIMOUSLY THAT** the Board of Directors recommend that the revised Terms of Reference for the Quality Committee be reviewed by the Governance and Human Resources Committee.

4.4 Governance & Human Resources Committee

Director Dooley reported. The committee received the following reports at their meeting on June 18:

- Directors Conflict of Interest Declarations

-
- Compensation, Benefits and Planning Annual Report
 - Board Remuneration and Expenditures report

Director Dooley requested approval of the following motions:

Director Stewart moved, Chair Cochrane seconded

Motion: 18-13 **MOVED AND CARRIED UNANIMOUSLY THAT** the Board of Directors approved the 2019 Board meeting schedule as presented.

Director Stewart moved, Director Tugnum seconded

Motion: 18-14 **MOVED AND CARRIED UNANIMOUSLY THAT** the Board of Directors approved the revised Terms of Reference for the Governance and Human Resources Committee.

4.5 Strategic Priorities Committee

Director Jules reported. The committee received the following report at their meeting on June 18:

- IH Research Overview and Impact

Director Jules requested approval of the following motion:

Director Tugnum moved, Chair Cochrane seconded

Motion: 18-15 **MOVED AND CARRIED UNANIMOUSLY THAT** the Board of Directors recommend that the revised Terms of Reference for the Strategic Priorities Committee be reviewed by the Governance and Human Resources Committee.

4.6 Stakeholders Relations Committee Report

Chair Cochrane reported. The report was accepted as presented.

5.0 REPORTS

5.1 President & CEO Report

The President & CEO Report was received as information. Chris Mazurkewich answered questions from the Board. Highlights included:

- Mental Health Substance Use services expanded with the opening of the new Cedar Sage Wellness Clinic in Kelowna.
- The Chair, CEO and other members of the Board and Senior Executive participate in regular site visits throughout various communities in IH's region. Tours recently took place in the Kootenay Boundary area from May 1 to 3, at Penticton Regional Hospital on April 27, and Kelowna General Hospital on June 6.
- The Nurse Practitioner outreach program in high schools increases access for students to primary care, mental health and other supports on-site at the schools.
- Artwork was unveiled at Cariboo Memorial Hospital and Royal Inland Hospital to celebrate the ongoing partnership between Interior Health and the Secwepemc Health Caucus. Secwepemc artwork will be in 8 facilities.

5.2 Chair Report

Chair Cochrane reported. Highlights included:

- Mentioned a micro grant program at Northern Health Authority who have innovative ways in dealing with wellness funding for small communities.
- Attended a graduation ceremony at the Sauder School of Business for physicians – there were interesting projects presented that could be brought forward to a future Board meeting for information.

Chair Cochrane acknowledged the work of Jenn Goodwin, VP Communications and Public Engagement, and the Communications team for their impressive work on the IH Magazine which is available on the IH website.

6.0 CORRESPONDENCE

Board correspondence was received as information.

7.0 DISCUSSION ITEMS

None

8.0 INFORMATION ITEMS

None

9.0 NEW BUSINESS

None

10.0 FUTURE AGENDA ITEMS

None

11.0 NEXT MEETING

Tuesday, October 2, 2018 in Kelowna, BC

12.0 ADJOURNMENT

There being no further business, the meeting adjourned at 3:30 pm.

Doug Cochrane, Board Chair

Chris Mazurkewich, President & CEO



Interior Health

ACTION ITEMS REGULAR BOARD MEETING

June 19, 2018

ITEM	ACTION	RESPONSIBLE PERSON(S)	DEADLINE
None Outstanding			

EXECUTIVE SUMMARY

Title	Patient and Family Centered Care Update
Purpose	To give the Interior Health Board of Directors a brief history and update on the patient and family centered care journey
Top Risks	n/a
Lead	Andrew Hughes, Health Services Administrator – KGH Tracey Rannie, Health Service Administrator – RIH
Sponsor	Karen Bloemink, Interim Vice President and Chief Operating Officer, Hospitals and Communities

RECOMMENDATION

That the Board of Directors receives this brief for presentation and discussion purposes only.

BACKGROUND

Patient and family centered care (PFCC) has always been an underlying philosophy and focus at KGH and RIH; with KGH formally defining PFCC as “an approach to care that consciously adopts the patients’ and families’ perspective about what matters in the planning, delivery and evaluation of care. We see our patients and their families as partners and we actively engage, educate, and empower them to be full participants in their care”.

Momentum for PFCC protocols and practices began to grow significantly at KGH with the development of the Central Okanagan Patient and Family Centered Care Steering Committee, a PFCC Core Working Group, which continues to meet monthly, the introduction of Lean and focused support for PFCC from Senior Leadership. PFCC has begun to influence every area of KGH. The PFCC environment at KGH has changed from hospital staff becoming familiar with the term “PFCC” to hospital staff incorporating PFCC practices and protocols on their units. KGH is actively engaging the roll out of our success to other locations.

Royal Inland Hospital recently brought together a core team of Patient Voices Network patient partners and Intensive Care Unit (ICU) team members to develop an ICU Patient and Family Advisory Council. The council discusses opportunities to improve the experience for critical care patients and their families. The council’s work is demonstrating a successful model that will be replicated throughout other units within RIH and is a key step towards achieving accreditation standards.

DISCUSSION

Patient and family centred initiatives and practices are positively changing the culture of care at KGH and RIH. Initiatives which are currently offered at both sites include:

- Butterfly Initiative – Laminated sign taped to the door or pinned to a patient curtain if a patient is in distress, dying, or has died.
- Unrestricted Visitation Policy – The removal of all barriers of time for hospital visitation.
- Wishing Well Initiative – Creative support for families of palliative patients in the ICU (consists of a palliative cart and gift options for family).
- Birth Chimes – Announce the birth of a baby throughout the hospital
- Stroke Rounds iPad – Including patients and families in their care process.

Please see Appendix A for the nine pillars of PFCC which define and drive KGH’s PFCC efforts, and Appendix B and C for a complete list of KGH and RIH’s PFCC initiatives and practices.

In addition to the work at RIH and KGH, connections have been made with Vernon Jubilee Hospital and Penticton Regional Hospital around specific projects such as “Wishing Well”. KGH has been working to create a PFCC

package that can be used to spread this work throughout Interior Health. The next step in this process is to engage with IH Quality to create a more standardized quality improvement framework for PFCC.

EVALUATION

n/a

ALTERNATIVES

n/a

CONSULTATION

Position	Date Information Sent	Date Feedback Received	Type of Feedback
John Cabral, Health Services Director	May 25, 2018	May 25, 2018	Consultation
Derek Koch, Spiritual Health Practitioner	May 25, 2018	May 25, 2018	Consultation
Kerry Heyworth, ICU Manager - KGH	May 25, 2018	May 25, 2018	Consultation
Tealya Metzger, HSA Administrative Assistant	May 25, 2018	May 25, 2018	Consultation
Sue Gardner-Clark, Health Services Director	August 17, 2018	August 21, 2018	Consultation
Meagan Hanson, Health Services Director	August 17, 2018	August 21, 2018	Consultation
Richard Jewitt, Health Services Director	August 17, 2018	August 21, 2018	Consultation

TIMELINES

Milestone	Lead	Date of Completion
Discussion brief written	Andrew Hughes, Health Services Administrator - KGH	May 28, 2018
Discussion brief updated	Tracey Rannie- Health Services Administrator - RIH	August 17, 2018
Assessment of communication requirements	n/a	<date>
Presentation to Strategy and Risk Management Council	n/a	<date>
Presentation to SET	Andrew Hughes, Health Services Administrator - KGH	April 30, 2018
Presentation to the Board	Andrew Hughes, Health Services Administrator – KGH Tracey Rannie- Health Services Administrator - RIH	October 2, 2018

ENCLOSURES

Appendix A: Kelowna General Hospital's Patient and Family Centered Care Pillars

Appendix B: Kelowna General Hospital Patient and Family Centered Care Initiatives and Practices

Appendix C: Royal Inland Hospital Patient and Family Centered Care Initiatives and Practices

Appendix D: PFCC Presentation

REFERENCES

Central Okanagan PFCC Steering Committee.

APPROVAL OF RECOMMENDATIONS

Name for Approval / Endorsement Signature Date

Appendix A: Kelowna General Hospital's Patient and Family Centered Care Pillars

The following 9 pillars of PFCC define and drive KGH's PFCC efforts:

- Dignity & Respect – Understanding and respecting each patient's values; Honouring their voice
- Effective Treatment – Trust in caregivers
- Quality and Safety – Create best outcomes and enhance the quality and safety of healthcare
- Information Sharing – Clear and comprehensive; facilitate autonomy, self-directed care and health promotion
- Participation – Patient engagement and partnership
- Collaboration – Caregivers work together with patients and families to design, implement, and deliver the best care possible
- Continuity and Smooth Transition of Care – Caregivers work together with patients and families
- Spiritual and Cultural Dimensions of Health – A holistic approach
- Care for the Caregiver – We honour the voice, values, knowledge, and beliefs of our staff and physicians and treat them with dignity and respect

Appendix B: Kelowna General Hospital Patient and Family Centered Care Initiatives and Practices

- KGH Foundation Small Grants Program – A program that began in 2016 that encourages hospital teams to come up with their own PFCC ideas for presentation to the PFCC working group. Grants of up to \$5,000 are available for approved proposals. Many of the initiatives below have been funded through the 50:50 Small Grants Program.
- Butterfly Initiative – Laminated sign taped to the door or pinned to a patient curtain if a patient is in distress, dying, or has died.
- Birth Chimes – Announce the birth of a baby throughout the hospital
- Memory Boxes – Adding dignity to the loss of life.
- Stroke Rounds iPad – Including patients and families in their care process.
- Cardiac Care – Comprehensive information available to patients to prepare for surgery. Written information, tours, and follow-up.
- Hospital Turbans – Providing religious and cultural support for patients.
- Musicians in Healthcare – Unit-based musicians that play in common areas, hallways and patient rooms.
- Cots and Mattresses – Letting families know they are welcome day and night.
- Unrestricted Visitation Policy – The removal of all barriers of time for hospital visitation.
- Who, Occupation, Why (WOW) – Reminding hospital staff to introduce themselves, their role and purpose for being at the bedside to patients.
- Virtual Reality – Modern technology providing new ways for reducing depression, anxiety and stress, and promoting happiness and healing in hospital patients.
- Wishing Well Initiative – Creative support for families of palliative patients in the ICU (consists of a palliative cart and gift options for family).
- Sight Loss/Hearing Loss Initiative – Creating awareness and better care for patients in these two demographics (Phase 1 and Phase 2 have been completed – Phase three is being researched).
- Staff Care – Increased efforts to develop a standardized approach for staff care when a trauma has taken place. Efforts include work on preventative care as well as intervention care.

Appendix C: Royal Inland Hospital Patient and Family Centered Care Initiatives and Practices

RIH Wide Initiatives

- Unrestricted Visitation Policy – The removal of all barriers of time for hospital visitation.
- Butterfly Initiative – Laminated sign taped to the door or pinned to a patient curtain if a patient is in distress, dying, or has died.
- Memory Boxes – Adding dignity to the loss of life
- Therapy Dog Program – Offers opportunities to interact with volunteers and their dogs
- Patient Voices Network – Patient volunteers are invited to participate in Rapid Process Improvement Workshops, and have been consulted when developing new clinic models and processes flow. Recent patient involvement has included patient feedback in the development of the Urgent Primary Care Learning Centre as well as the space planning and wayfinding within the Emergency Department
- Birth Chimes – Announce the birth of a baby throughout the hospital

Volunteer Services

- Friendly visitor program – A volunteer visits our longer staying rehabilitation patients for one-on-one visits in order to provide company and moral support
- E-wishes program – Out of town families are able to connect with their loved ones via printed messages that are delivered to the patient
- Volunteer program – Volunteers are imbedded within various units throughout the site, such as the Emergency Room, Day Care, ICU and the Cancer Clinic in order to help family members navigate through the healthcare system. The site also has 24 youth volunteers who have a strong focus on connecting with patients and their families.

Intensive Care Unit

- Wishing Tree Initiative – Through the support of the RIH Foundation, small moments of celebration are coordinated around the patient's end of life
- ICU Patient and Family Advisory Council (PFAC) – Makes recommendations on matters that impact the patient experience in the ICU at RIH

Cardiac

- Telehealth Home Monitoring Program – Allows patients to receive care closer to their home and improve patient autonomy

Medical and Surgical Inpatient Units

- Stroke Rounds iPad – Including patients and families in their care process.
- Estimated Date of Discharge – White board are being trialed at every patient's bedside to increase communication between the care team, patient and families. The goal will to expand the use of the whiteboards across the site to all inpatient units.
- Smart Track – Allow patient's friends and family to see where their loved one is in the surgical journey which allows the m to stay informed and decreases anxiety

Patient and Family Centred Care Developments

October 2018

Dimensions of PFCC

- **Dignity & Respect** – Understanding and respecting each patient’s values; Honouring their voice
- **Effective Treatment** – Trust in caregivers
- **Quality and Safety** – Create best outcomes and enhance the quality and safety of healthcare
- **Information Sharing** – Clear and comprehensive; facilitate autonomy, self-directed care and health promotion
- **Participation** – Patient engagement and partnership
- **Collaboration** – Caregivers work together with patients and families to design, implement, and deliver the best care possible
- **Continuity and Smooth Transition of Care** – Caregivers work together with patients and families
- **Spiritual and Cultural Dimensions of Health** – A holistic approach
- **Care for the Caregiver** – We honour the voice, values, knowledge, and beliefs of our staff and physicians and are treated with dignity and respect.

A Sampling of PFCC At KGH

Butterfly Initiative – Laminated sign taped to doors or pinned to patient curtains if a patient is in distress, is dying, or has died.



Wishing Well Project



Hospital Turbans



Memory Boxes



Great partnership with the KGH Foundation and the Small Grants Program!

KGH FOUNDATION
Giving **Changes** Everything.







A Sampling of PFCC At RIH

ICU Patient and Family Advisory Council

Therapy Dog Program



Estimated Date of Discharge White Boards

Understanding My Stay					
My name:			Messages to/from my family:		
Today's date:		My nurse/my doctor:			
Estimated date of discharge:			Diet:		
I can go home when:			Today's main goals:		
Glasses 	Dentures 	Hearing Aides 	Hearing Loss 	Meal Setup 	Help Eating 
Mobility Level			Aids:		

Birth Chimes

Friendly Visitor Program



Next Steps

- ✓ Continue to build on successes at KGH and RIH
- ✓ Work with IH Quality on a standard Framework for PFCC
- ✓ Develop a plan to continue with the spread of PFCC in IH



SUMMARY REPORT FROM HAMAC TO THE BOARD

HAMAC Date: Aug 10, 2018 (electronic circulation of documents only)

1. MOTIONS PASSED
None.
2. DECISIONS/RECOMMENDATION
None.
3. ACTIONS
None.
4. PRESENTATIONS TO HAMAC
<p><u>Accessing screening mammography in Interior Health (Tim Rode)</u> Providing information on community specific screening mammography and the procedure for patients who receive a positive screening result and do not have a GP and/or access to an NP.</p> <p><u>Medical Imaging Annual Quality Report 2017/18 (Tim Rode)</u> Quality and safety summary report for Medical Imaging 2017/18</p> <p><u>Medical Imaging Medical Quality, Provincial and Interior Health Initiatives (Dr. Devin Harris)</u> To provide an update on Medical Imaging Medical Quality initiatives and responses to provincial reports and recommendations.</p>

HAMAC Date: September 14, 2018

1. MOTIONS PASSED
<p>Motion: That Health Authority Medical Advisory Committee (HAMAC) endorses the Welcoming and Acknowledgement of First Nation Traditional Territory Policy as a corporate IH policy – <i>motion carried</i></p> <p>Motion: That HAMAC endorses the appointment of Erinn Snyder, Nurse Practitioner, to the Pharmacy & Therapeutics membership as a voting member, for a one (1) year term – <i>fourteen (14) members voted unanimously, one (1) member abstained, motion carried.</i></p>
2. DECISIONS
None.
3. ACTIONS
None.
4. PRESENTATIONS TO HAMAC
<p><u>Welcome and Acknowledgement of First Nations Traditional Territory policy (Brad Anderson, Kris Murray)</u> To provide direction to IH staff on cultural protocols for Welcoming and Acknowledging of the First Nations Traditional Territory to advance the cultural safety and competency of IH.</p> <p><u>Measurement System for Physician Quality Improvement (Dr. Guy Fradet)</u> Update provided to committee members with regard to recent provincial meetings that have taken place.</p> <p><u>Redesigning HAMAC governance (Dr. Harsh Hundal, Dr. Mike Ertel)</u> Discussion looking forward to future state of HAMAC and its governance.</p>

Stakeholder Relations Committee

REPORT TO THE BOARD

— October 2018 —
(June 8 to August 31, 2018)

The Committee has participated in the following stakeholder relations activities in support of management led external/internal communication responsibilities and the Board's goals and objectives.

June 2018

- | | |
|---------|---|
| June 11 | Secwepemc Artwork Unveiling Event – Royal Inland Hospital – Director Lawrie |
| June 14 | Secwepemc Artwork Unveiling Event – Cariboo Memorial Hospital – Director Tugnum |
| June 15 | Kootenay Lake Hospital Foundation Legacy Golf Event – Director Dooley |
| June 15 | Health Authorities Chair to Chair Meeting – Chair Cochrane |

July 2018

- | | |
|--------------|--|
| July 5 | IH Research Ethics Board Meeting – Director Tugnum |
| July 13 | Health Authorities Chair to Chair Meeting – Chair Cochrane |
| July 16 – 18 | Chair/CEO First Nations Tours (Adams Lake Band, Spatsin Health Centre, Shuswap Band, Akisqunik First Nation Health Centre, Tobacco Plains Band, St. Eugene and Tours of Operation Street Angel, Mary Basil Recovery House and Scotty's House) – Chair Cochrane |
| July 20 | Kootenay Boundary Regional Hospital Foundation Golf Event – Director Dooley |

August 2018

- | | |
|-----------|--|
| August 3 | Kootenay East Regional Hospital District Board Meeting – Director Rounsville |
| August 17 | Health Authorities Chair to Chair Meeting – Chair Cochrane |

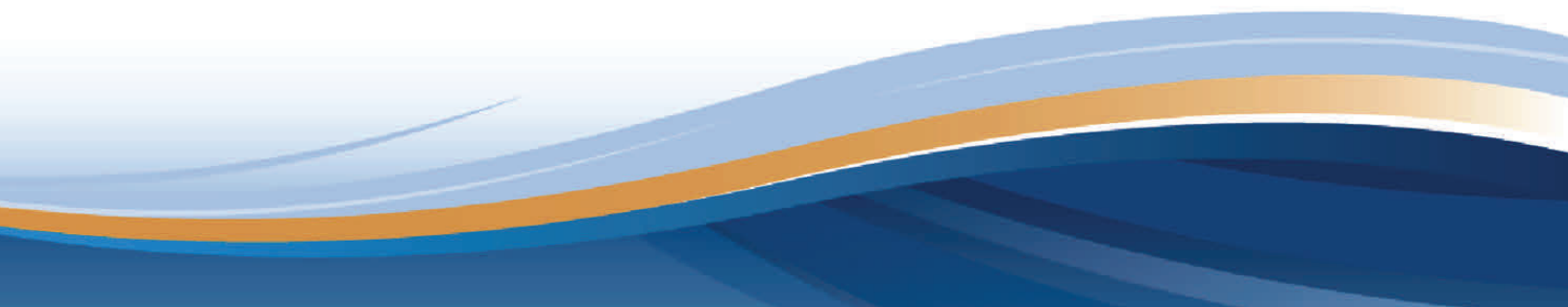


Interior Health
Every person matters



PRESIDENT & CHIEF EXECUTIVE OFFICER REPORT TO THE BOARD

SEPTEMBER 2018



Highlights

June - August

Kimberley residents returned home, following wildfire evacuations

Following the rescind of the evacuation alert for Kimberley on Sept. 4, residents and Home Health clients who had been temporarily relocated were able to return home, with support from staff and the local community. The residents had been moved on Aug. 17, when wildfire activity near Kimberley resulted in an Evacuation Alert from the Regional Kootenay District. To ensure their continued safety, residents of the Kimberley Special Care Home (KSH) and Garden View Village, along with vulnerable home health clients, were temporarily relocated. The move involved coordination and help from many facilities, businesses, and community members. While some people were able to stay with family and friends, 53 clients were temporarily moved

into the F.W. Green Home in Cranbrook and 13 were in surrounding hospitals or at other care facilities. The Prestige Hotel also housed 41 relocated individuals. Although it was hard work and tiring at times, staff involved never lost sight of the safety and comfort of those who were impacted by this relocation.

“It really did feel like one IH these last three weeks as everyone – not only the site staff, but those in other departments, right from top to bottom, worked together. It was just amazing,” said Residential Care Manager Jeff Betker.

MyHealthPortal reaches 50,000-patient milestone

Over 50,000 patients across IH have now enrolled with MyHealthPortal, IH’s online resource that allows patients access to their own personal health information. The portal provides patients with 24-hour secure online access to their Interior Health lab results, medical imaging reports, visit history, and certain appointment details and instructions. This content expanded this summer to include some dictated clinical reports from physicians, nurse practitioners, and midwives.

IH names new CEO

This summer, Board Chair Dr. Doug Cochrane announced Susan Brown as IH’s next CEO. Ms. Brown will officially step into the role at the end of October, when current CEO Chris Mazurkewich retires. “With an in-depth knowledge of Interior Health and a deeply rooted commitment to patient- and family-centred care, Ms. Brown has the experience and broad skillset required to lead the health authority in its efforts to improve patient care in communities across the Interior,” provincial Health Minister Adrian Dix said following the announcement. Stakeholders across IH and the province reacted positively to the news, referencing Ms. Brown’s experience as a Vice-President at IH and her familiarity with our communities and the broader health system as key advantages.



Art unveiling

Interior Health and the Secwepemc Health Caucus celebrated their continuing partnership and growing relationship in June when they gathered at Royal Inland Hospital and at Cariboo Memorial Hospital to unveil new Secwepemc artwork by artist Tony Antoine. The unveilings were the result of a continued collaboration between IH and regional First Nations leaders to provide quality care that is culturally sensitive and welcoming. Since 2015, Aboriginal art has been installed in Kelowna, Vernon and Penticton hospitals; in Williams Lake, a carved wooden bench from the Tsilhqot’in First Nation is located at Deni House residential care; and in Kamloops, a glass etching is hung at the Home Health community clinic. The latter was also created by Antoine, who hails from Splotsin. Antoine’s artwork is being hung in 9 IH facilities.

Strategic Goal #1

Improve health and wellness



Patient Suneil Randhawa was welcomed by staff and physician as the first patient to the Kamloops Urgent Primary Care Centre on June 12, 2018 .

IH's first urgent primary care centre opened in Kamloops

The Kamloops Urgent Primary Care and Learning Centre opened officially on June 8th, with Health Minister Adrian Dix in attendance. The opening represented months of planning and work across several portfolios in IH, as well as collaboration with local Kamloops physicians and partners. In late August, the Family Practice Learning Centre went live, with medical residents working alongside physician preceptors. A public event was held on September 7.

Improving care for seniors in the community

Seniors Health and Wellness Centres opened in Revelstoke (June 19) and Salmon Arm (September 6). The goal of the program in both communities is to improve seniors care through timely access to specialized teams of healthcare practitioners who will provide a comprehensive geriatric assessment, intervention, treatment and follow-up care; focusing on independence, health promotion and prevention, stabilization and improvement of seniors' health.

More Smoke Free Spaces in Interior Health

Smoke free bylaws support smoke and vape free living where residents live, work, learn and play. These bylaws also reduce the likelihood that youth will start smoking, and support current smokers who want to cut down or quit. By August 31, IH's Population Health department achieved its target of assisting 50% of local governments to adopt stronger smoke free bylaws. Thirty of the sixty local governments in the IH region now have smoking restrictions that go above and beyond provincial regulation. The recent local government interest in smoke free spaces is a result of the upcoming legalization of non-medical cannabis. Communities are moving to prohibit cannabis use in outdoor places where children gather, such as playgrounds, parks and beaches, by adopting new bylaws or strengthening existing ones.

Strategic Goal #2

Deliver high quality care



Cedar Sage team member Jason McCarty (L) and his client, Moshe Yarosky, work to help Moshe cope with a difficult life transition.

Surgical quality improvement program now at KBRH

Kootenay Boundary Regional Hospital (KBRH) is the newest Interior Health hospital to offer [NSQIP – the National Surgical Quality Improvement Program](#). NSQIP is an outcomes-based data program by the American College of Surgeons (ACS) used to measure and improve the quality of surgical care. It provides KBRH staff and physicians with tools and the support necessary to make informed decisions about improving quality of care. NSQIP has been in place at both RIH and Penticton Regional Hospital since 2012.

Drug Checking Services Operational

Two Fourier-Transform Infrared Spectroscopy (FTIR) machines, one each in Nelson (ANKORS) and Kamloops (ASK Wellness), are now operational. As well as providing regular drug checking services, the machines are supporting festivals including Shambhala. A second course of drug checking training on fentanyl test strips was provided to contracted agencies on July 5, 2018. All community-based drug checking sites are now operational across IH.

Early feedback on Cedar Sage clinic positive

A [feature story in the June @InteriorHealth magazine](#) describes the experience of Moshe Yarosky, a 76 year-old man who was among the first group of clients referred to the Cedar Sage clinic, which opened in downtown Kelowna earlier this year. Mr. Yarosky credits his physician and the counsellor he sees at Cedar Sage with supporting him through grief and anxiety he's felt since his wife's recent death. Okanagan Indian Band Councillor Allan Lewis says he's pleased IH reached out to local First Nation leaders for input on how to make the clinic welcoming and culturally safe. He is optimistic Cedar Sage will make a difference for people whose mental health is an ongoing concern.

Reducing delays to receive cardiac diagnostics

There is no longer an outpatient echocardiogram (ECHO) waitlist in Kelowna. Planning is underway to reduce inpatient delays for ECHO and other cardiac diagnostics ordering in the central Okanagan. With the support of the new Cardiac Diagnostic Manager, support to incorporate similar LEAN efficiency strategies for other IH ECHO sites is in progress.

Transcatheter Aortic Valve Implantation (TAVI)

Interior health is pleased to announce continued expansion of Cardiac Services for IH: as of September 19, Transcatheter Aortic Valve Implantation (TAVI) is now being offered within the Cardiac Program at Kelowna General Hospital (KGH). TAVI is a minimally invasive aortic valve replacement procedure for patients who are not candidates for open heart surgical intervention because of high surgical risk, advanced age, frailty, or other comorbidities. Offering TAVI at KGH is exciting news for patients within in Interior region who will no longer have to travel to the Lower Mainland or Vancouver Island for the same procedure. The first two TAVI cases were successfully completed on September 19.

Strategic Goal #3

Ensure sustainable health care

Okanagan College – Health Sciences groundbreaking

Interior Health leaders joined representatives from the Ministry of Advanced Education, Skills and Training and Okanagan College today to celebrate the start of construction on a new Health Sciences Centre at the college. Susan Brown, VP and COO Hospitals and Communities, spoke at the groundbreaking event, describing the project as an exciting new facility that represents a bright future for education in B.C. and for health-care professionals in the region. Jenn Goodwin, VP, Communications & Public Engagement, also attended the event.

Proponent named – RIH Patient Care Tower project

EllisDon Infrastructure was named the preferred proponent on the Royal Inland Hospital Patient Care Tower project following an extensive evaluation of proposals from three shortlisted teams. EllisDon Infrastructure will design, build and partially finance the Patient Care Tower project, as well as maintain it for a 30-year period. The next stage in the competitive selection process is to complete a performance-based contract with EllisDon Infrastructure this fall. Construction is expected to begin in the fall, and the new tower is anticipated to be open for patients in 2022. Details of the contract, including financial and schedule, will be released after the agreement has been finalized.



Expanding access to MRI exams

Residents of East Kootenay now have increased access to diagnostic testing within the region with a new, permanent MRI machine, which began operating at East Kootenay Regional Hospital (EKRH) on June 11. Interior Health expects MRI testing in Cranbrook will increase from approximately 1,300 to more than 3,000 annual exams.

In August, Royal Inland Hospital trialed a new overnight MRI shift for three weeks, and it received positive patient feedback. RIH will increase its hours permanently this fall.

Seniors housing to open in 2019 in Cranbrook

Thanks to a partnership between Golden Life Management, Interior Health, and Columbia Basin Trust expanded housing options for Cranbrook and area seniors is a step closer to reality. Construction of the new Kootenay Street Village is well under way with an expected opening in summer 2019. The new 97 unit Village will be built and operated by Golden Life Management and includes 30 new publicly-funded residential care beds through Interior Health and 6 private-pay residential beds. The Village plans include other housing options as well, including subsidized units for seniors and independent living.

Arrow Lakes ED redevelopment update

Cover Architecture Collaborative Inc., a Nelson-based firm, has been selected to do the detailed design for the emergency department (ED) redevelopment project at Arrow Lakes Hospital. Highlights of the project include a dedicated triage area; two new trauma bays; renovated exam bays with improved privacy; new utility rooms; and an enclosed multi-purpose meeting room near the ED for family consultations. Completion is expected in early 2020.

Strategic Goal #4

Cultivate an engaged workforce and a healthy workplace



[Regina Black and Melissa Keusch, from Royal Inland Hospital's Housekeeping team, share their safety tip.](#)

Introductory cultural safety course available online to all IH staff

New iLearn modules [launched this summer](#) provide an orientation to cultural safety. The modules offer an overview of the Aboriginal peoples of the Interior region and how colonization continues to impact their health. The modules outline the importance of engaging Aboriginal peoples as partners in health, and the role of Aboriginal cultural safety in enhancing the access of Aboriginal peoples to quality health care.

Volunteers at KGH receive violence prevention training

For the 750 volunteers at Kelowna General Hospital, interaction with patients and visitors is an important part of the role. KGH volunteers are stationed in the emergency department, mental health units, entrance points, and other patient/visitor contact points throughout the hospital. Sometimes, situations can escalate – and volunteers need to be ready. This summer, volunteers participated in training based on the Provincial Violence Prevention Curriculum. Feedback was appreciative as volunteers thanked organizers for recognizing their safety concerns and questions.

Launch of the *Healthier, Safer IH* campaign across IH

A renewed focus on health and safety in the workplace kicked off this summer. Staff communications included a poster series that highlights corporate 'action items', as well as the 'Safety Star' [videos](#) campaign. Six videos highlight staff insight into reducing musculoskeletal injuries, improving psychological safety and embedding a culture of safety in our work.

Recognition for leadership, commitment

**Read more stories of sensational staff and physicians at IH [In the Loop](#)*

Recognizing Dr. Glenn Fedor, outgoing HAMAC Chair

Dr. Glenn Fedor started with the Health Authority Medical Advisory Committee (HAMAC) in 2004, and for the past three years, he has served as HAMAC chair. At his last meeting on June 15, his colleagues travelled to his home community of Williams Lake to bid him a fond farewell upon his well-deserved retirement from HAMAC. Dr. Harsh Hundal is the new Chair, effective July 1st.

Health Care Hero – Gold Apple award

Lynda Martyn, speech-language pathologist, has been named this year's Health Care Hero for Interior Health in the B.C. Health Care Awards competition. Lynda was recognized for leading and organizing the Kelowna Cleft Palate Clinic, held four times per year in Kelowna. It is the only clinic of its kind in B.C., outside of Vancouver and Victoria. Lynda connects with families and provides support from the time of the birth of the baby into his or her teenage years. Read more about Lynda's award in the [June 26 memo](#)* and visit the [BC Health Care Awards website](#) for more information about the awards.

Community Engagement

Stakeholder engagement by community liaisons

Interior Health conducts regular engagement with provincial, regional and local partners and stakeholders. Below are just a few examples of some of meetings and events attended by leaders and community liaisons from June – August 2018.

- Community Engagement Meeting at the City of Penticton, at Penticton City hall on July 12th. Attendees included Summerland CAO, Mayors and Councillors from Summerland and Penticton, RDOS representatives, health care leads from Penticton Indian Band, Enowkin and Oknakane Friendship Centre.
- Meeting with Royal Roads University's Continuing Studies department to discuss continued partnership and collaborative efforts between Northern Health, Interior Health and the university.
- Employee Recruiters attended the UBC Roadshow (Revelstoke, Sicamous, Nakusp); a networking event with Accelerate Okanagan (Kelowna); a career panel at a Vernon Secondary School; the Kelowna Community Resource Job Fair; and the Sonography Canada conference in St. John's, Newfoundland, which provided opportunities to network with sonographers from across Canada.
- IH's Aboriginal recruitment lead hosted an exhibit at the 24th Annual Aboriginal Conference – Okanagan College (Kelowna); presented at the Aboriginal focused Exploring Health Careers event and facilitated Penticton Regional Hospital tours for youth attendees; and connected with the program coordinator at the Nicola Valley Institute of Technology regarding partnering/presenting to students of the mobile HCA/CHW program (mobile program set to start in Lytton in September 2018).
- The VP, Medicine and Quality attended the appreciation luncheon for the Grand Forks Hospital Auxiliary members who raised over \$160,000 over the last year. This will go to the purchase of a new ultrasound machine for the local emergency department.

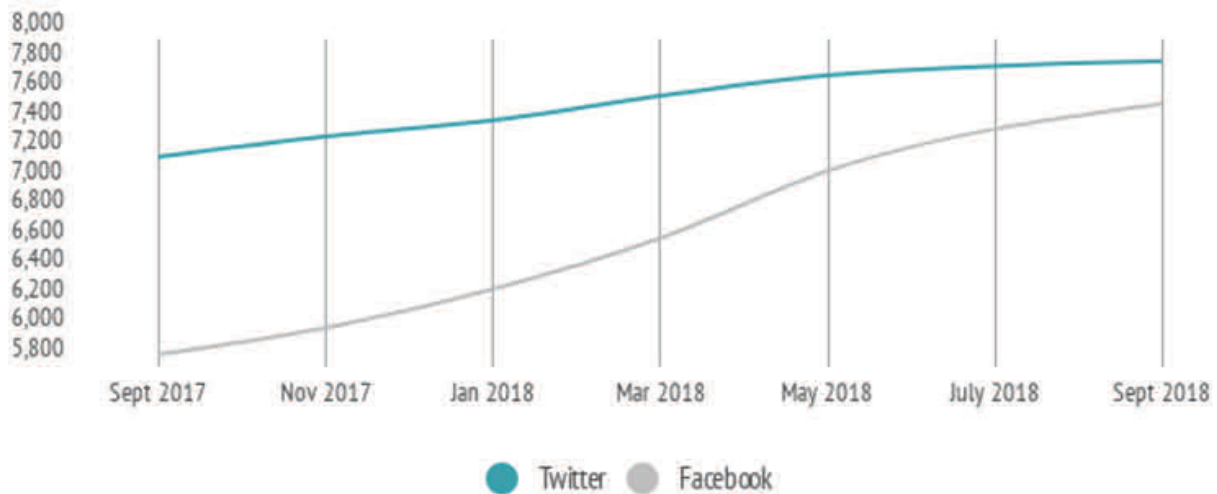
Community Engagement

Social media presence and engagement

Social media engagement

	<i>Tweets</i>	<i>Impressions</i>	<i>Mentions</i>	<i>Facebook posts</i>	<i>Reach</i>
<i>June</i>	54	55,000	138	62	1,875
<i>July</i>	47	69,000	127	55	2,315
<i>Aug</i>	66	111,000	212	64	6,319

Number of users: **7,851** (Twitter) / **7,569** (Facebook)



Community Engagement

News media presence and engagement

June 8	<u>Kamloops Urgent Primary Care and Learning Centre will soon open its doors to the public</u>
June 11	<u>Secwepemc artwork signifies culturally safe welcome at IH health sites</u>
June 13	<u>Urgent Primary Care Centre welcomes first patient</u>
June 14	<u>Secwepemc artwork signifies culturally safe welcome at Cariboo sites</u>
June 15	<u>Permanent MRI service under way at EKRH</u>
June 19	<u>Seniors with age-related disease to benefit from new team-based model of care</u>
June 19	<u>Less standing water means fewer mosquito bites</u>
June 21	<u>Construction under way for new Cranbrook seniors' housing</u>
June 22	<u>Vernon first community to pilot expanded MyHealthPortal content</u>
June 23	<u>Ashcroft Hospital and Health Centre Emergency Department temporary service change</u>
June 23	<u>Arrow Lakes Hospital Emergency Department temporary service change</u>
June 28	<u>Nicola Valley Hospital emergency department – construction impacts</u>
June 28	<u>Ashcroft Hospital and Health Centre Emergency Department temporary service change</u>
July 10	<u>Elkford Emergency Department temporary service change</u>
July 11	<u>New location sought for Princeton mental health drop-in centre</u>
July 13	<u>Take precautions when skies are smoky</u>
July 13	<u>IH's position on improperly discarded needles</u>
July 16	<u>Shuswap Home & Community Care Building Temporarily Closed</u>
July 19	<u>Take precautions when skies are smoky</u>
July 23	<u>Penticton hospital namesake tours David E. Kampe Tower</u>
July 23	<u>Tudor Village lab closed for expansion</u>
July 24	<u>All services resume in Shuswap Home & Community Care Building</u>
July 26	<u>High temperatures expected</u>
August 1	<u>Arrow Lakes Hospital Emergency Department Redevelopment Project Update</u>
August 7	<u>Interior Health Board announces new CEO</u>
August 8	<u>Reminder: Take precautions when skies are smoky</u>
August 9	<u>Stay safe while enjoying outdoor festivals</u>
August 17	<u>Wildfires prompt precautionary relocations in Kimberley</u>
August 17	<u>South Okanagan General Hospital Emergency Department temporary service change</u>
August 18	<u>Air quality and strenuous outdoor activity</u>
August 21	<u>Barriere Health Centre emergency department closed today</u>
August 22	<u>Birds in BC tested positive for West Nile virus</u>
August 23	<u>Contractor chosen for Kootenay Boundary Regional Hospital work</u>
August 24	<u>Expanded MyHealthPortal content now available in the Kootenays</u>
August 28	<u>Temporary public parking lot closure at KGH</u>
August 30	<u>New Patient Care Tower project for Kamloops moves ahead</u>



Board Correspondence October 2018

Correspondence Received:

- June 29 Genome BC 2017/2018 Annual Report
- July 27 Health Sciences Association (HSA) – Executive Summary - April 2018 Primary & Community Care Conference

The above correspondence items have been referred to the CEO and/or appropriate Vice-President and/or Patient Quality Care Office and have been responded to accordingly.

June 29th, 2018

Chris Mazurkewich
President & CEO
Interior Health Authority
Interior Health Corporate Office
#220 - 1815 Kirschner Road
Kelowna, BC V1Y 4N7
Canada

Dear Chris,

On behalf of the Board of Directors and staff, I am pleased to send you the Genome British Columbia Annual Report for the fiscal year 2017/2018. In this report we highlight activities and successes from the past year that illustrate how genomics is contributing to a healthier British Columbia.

Genomics is not only affecting positive change in health care delivery and outcomes, but this cutting-edge science and related technologies are improving our understanding of the natural world. This is enabling us to adapt to climate change, increase our food safety and security, and develop cleaner energy while driving economic growth.

We share the credit for our ongoing success with our corporate and government partners. These include the Province of British Columbia, Genome Canada, Western Economic Diversification Canada, and the many private and public sector organizations worldwide that help to fund our research and innovation enterprise.

Thank you for your support! I hope you enjoy the report and welcome your feedback.

Sincerely,



Pascal Spothelfer
President and CEO

Enclosure



Genomics for a healthier British Columbia

 **Genome
British Columbia**
Leading ▶ Investing ▶ Connecting

2017–2018
Annual Report



TABLE OF CONTENTS

02 Genomics for a healthier British Columbia

04 A prescription for clinical health care

09 Protecting against invasive pests and pathogens

13 Breathing life into the economy

15 Checking the pulse of society

18 Catalyzing innovation

22 Message from CEO and Board Chair

24 Financials

33 Corporate Information

Genomics Now!

The genomics revolution is happening all around us. Scientists are unlocking the code of all living things, (humans, animals, plants, microbes), to improve our understanding of biological systems at a molecular level. Genomics is not science fiction – this transformative technology is changing how we see and interact with the living world in meaningful ways.

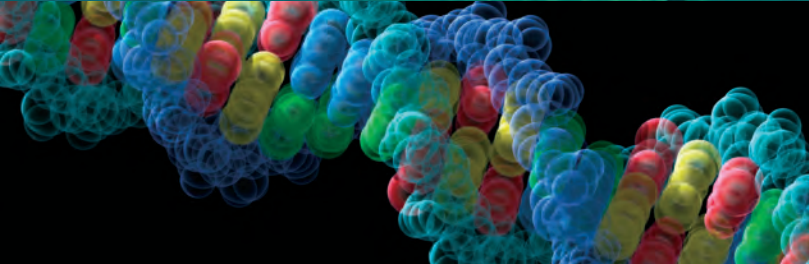
The knowledge and innovations emerging from genomics are unearthing solutions to complex biological challenges including applications in health, forestry, fisheries, aquaculture, agrifood, energy, mining and the environment. These new approaches give rise to the need for dialogue regarding societal, economic, and ethical implications as new and powerful genomic solutions are applied to benefit society.

The Legacy of Dr. Michael Smith



It's been a quarter century since Dr. Michael Smith became BC's first Nobel laureate. Smith (with Dr. Kary Mullis), won the Nobel Prize in chemistry for discovering how to make a genetic mutation precisely at any spot in a DNA molecule. This foundational discovery paved the way for new diagnostic tests and treatments for genetic diseases.

Forever a champion of genomics research, the influence and legacy of Michael Smith are still felt today. He pushed for federal funding to establish a new funding council for genomics research, which led to the creation of Genome Canada and regional centres across the nation to administer research contracts. He created Canada's first genomics research centre for cancer research and he was one of the strongest voices for science education – a value Genome BC continues to uphold.



Genomics for a healthier British Columbia



The technologies supporting the Internet may be commonplace today; however, they were borne out of a period of discovery. Concepts had to be developed and proven, technologies refined and applied, spawning commercialization across many fronts. The web has evolved through several innovations to become an interconnected platform where information is democratized, and users are connected. The Internet we use today is the result of transformative technologies that have changed how we connect to the world, forever.

With continued and remarkable advancements in next generation sequencing, a similar story could be told to describe the evolution of genomics. Having moved well beyond a period of pure discovery at the laboratory bench, a new era is moving genomics into the mainstream. The unprecedented pace of technological change and information is leading to incredible opportunities to understand and solve problems.

Genomics is not only driving positive change in health care delivery and outcomes, but this cutting-edge science and related technologies are improving our understanding of the natural world. This is enabling us to adapt to climate change, increase our food safety and security, and develop cleaner energy while driving economic growth.

As a catalyst for building a strong life sciences ecosystem, Genome British Columbia (Genome BC), has helped build the bridge between academia where genomics knowledge is discovered, and the industrial sectors where applications are applied to solve complex biological challenges, helping British Columbia move toward a healthier future — in health, forestry, agrifood, fisheries and aquaculture, energy, mining, and the environment.

2017/18 Year in Review

Highlights

Since 2000, Genome BC has led genomics innovation on Canada's West Coast, and facilitated the integration of genomics into society.

Managing a cumulative portfolio of over \$1 billion in more than 360 genomics research projects and science and technology platforms, we've helped to create jobs in Canada while addressing challenges in key sectors such as health, forestry, fisheries and aquaculture, agrifood, energy, mining, and the environment.

Economic Impact

\$1.4B*

Economic Impact to BC's GDP



21,149*

Jobs Created



910

Partnerships



74

Companies Advanced



607

Patent Applications**



\$784.5M

Direct Co-investment Attracted



\$1B

Total Investment

Academic Results

2,720

Scientific Publications



* Economic and Social Impact Analysis, MNP LLP, 2014 ** in all countries including provisional

Projects and Funding

Health	\$491.1 Million
Tech Development and Platforms	\$159.4 Million
Agrifood	\$56.9 Million
Forestry	\$107.7 Million

Environment	\$16.6 Million
Fisheries and Aquaculture	\$66.3 Million
Mining and Energy	\$37.4 Million
All figures are cumulative as of March 31, 2018.	

A prescription for clinical health care

Genomics is at the core of precision health. It allows us to understand why some people are more susceptible to certain illnesses, while others are likely to remain healthy. Genomic tools can also predict responsiveness to treatment including whether you are likely to experience an adverse drug reaction or to better predict successful treatment options.

This is in direct contrast to the traditional one-size-fits-all approach, with little or no consideration for the differences between individuals — an important consideration when certain therapies may present other complications, or have extreme costs associated with little or no benefit to the patient.

Genomic applications in precision health are already saving lives in clinical health care settings — improving health outcomes through improved diagnosis, disease management and prognosis for patients affected by cancer, heart disease, autism, epilepsy, rare diseases and other debilitating conditions.

The unique genetic variations between people are an important factor in determining the best and most precise approach to treatment. Precision health care considers not only our genetic profile, but also the environment we live in, our familial history and our lifestyle choices — all of which contribute to our health and well-being.

With a vision to further advance the use and application of genomics in clinical practice, Genome BC has invested over \$491 million in 196 health research projects since 2001. Today some of the best health research minds in the world call British Columbia home and, with an emphasis on collaboration between research and clinical expertise, the effort to integrate genomics into clinical settings is paying off. Evidence of this strength was demonstrated in 2017 when BC's clinicians and researchers secured an incredible 38% of the total funds available through the Genome Canada and Canadian Institutes of Health Research (CIHR) competition for research

funding in precision health. Combined with funding from Genome BC and other partners, over \$58 million is being invested in BC for work on precision health challenges and opportunities, with a strong focus on the clinical application of genomics.

Genome BC looks forward to working with provincial health authorities, the Ministry of Health and these extraordinary research teams to validate and facilitate the uptake of genomic applications in the health care system. As clinical applications of genomics become an integral part of the continuum of care, we will continue to see improvement in disease prevention, diagnosis, and treatment, as well as informing our approaches to wellness, nutrition, and public health.



Dr. Aly Karsan
Photo: BC Cancer

The right drug, to the right patient, at the right time

Pharmacogenomics is the science that studies the role of the genome related to an individual's response to a drug. The science is improving the safety and efficacy of many therapeutic treatments. Notably, pharmacogenomics can help to prevent adverse drug reactions; an unwanted or harmful reaction experienced following the administration of a drug or combination of drugs. Variants in your genetic makeup can also determine whether certain medications or dosages will be effective or not in treating your medical condition.

Genome BC, in cooperation with BC's Ministry of Health, is exploring opportunities to illustrate the effectiveness of pharmacogenomics within BC's public health care system. This three-phase initiative seeks to advance the clinical implementation of pharmacogenomics in British Columbia. Phase I and II will outline the anticipated resources and infrastructure while developing a robust business case and a detailed study design. Phase III would initiate a project focused on evaluating the potential pharmacogenomics has to improve health outcomes for British Columbians and improve cost-effectiveness within the health care system.

Improving precision

Genetic tests on patient material is used to screen for risk of hereditary cancers. This testing enables people to learn what cancers they may develop, how often to have medical follow-ups, what further cancer screening to get, inform their families of potential risk, and whether there are preventive measures that might mitigate risks.

Until recently, patients had to undergo multiple individual tests of their tumor tissue in order to determine whether they would respond to specific therapies. Now the OncoPanel and Myeloid Panel enable clinicians to test for more than a dozen of the most common genetic mutations associated with solid or blood-based cancers, respectively, through a single test.

These multi-gene analysis panels, developed by a team led by Dr. Aly Karsan at BC Cancer's Michael Smith Genome Sciences Centre, have been fully integrated into clinical practice in BC, and as part of standard care in Canada for acquired cancers. Health economic analysis has shown the panels to be a cost-effective way to improve cancer outcomes. Wait times for hereditary cancer screening in BC have gone from several months to a few weeks. BC's expertise is now being sought by other Canadian jurisdictions to alleviate backlogs and speed up testing nationwide.

"The gene mutations included on these panels were designed to help physicians choose between real treatment options that cancer patients can access today. As our knowledge of cancer genetics evolves, we can rapidly add more tests for more mutations with the hope of helping more cancer patients faster."

—Dr. Aly Karsan, Centre for Clinical Genomics, Michael Smith Genome Sciences Centre, BC Cancer

Go-PGx: Preventing chemotherapy side effects in children

Genetic differences in patients can affect the likelihood of developing an adverse drug reaction. Drs. Bruce Carleton and Colin Ross, both of the University of British Columbia, are working to reduce and prevent the incidence of adverse drug reactions among children being treated for cancer. Building upon the success of their ongoing pharmacogenomics research, they are developing genomics-based tests to determine genetic susceptibility to adverse drug reactions and incorporating these tests into clinical practice in pediatric cancer centres across Canada.



Drs. Bruce C. Carleton (right) and Colin J. Ross



Rory

RORY'S STORY:

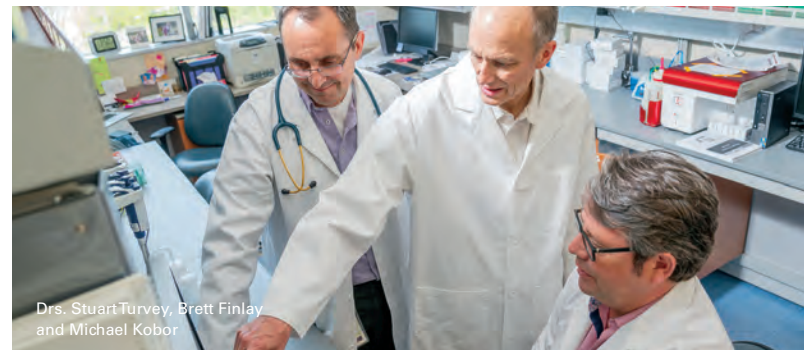
Children should have a future, not cancer

Just before her first birthday, Rory was fighting for her future. As if cancer surgery was not enough for a child to face, the potentially devastating side effects of chemotherapy treatment would also put Rory's future at risk. At the time, her oncologist recommended a pharmacogenetic study which would indicate Rory's risks for side-effects — her results showed a significant risk of hearing loss or deafness. Based on this information, Dr. Bruce Carleton and his team searched for an alternative that would be more likely to preserve hearing. They found a less toxic drug which promised to be as effective to treat Rory's cancer, but had a greater chance of preserving her hearing. It has been three years since Rory finished chemotherapy. Today she is cancer free and her mom proudly reports, "she is able to communicate (sometimes non-stop) and her hearing hasn't been impaired (although it's sometimes selective.)"

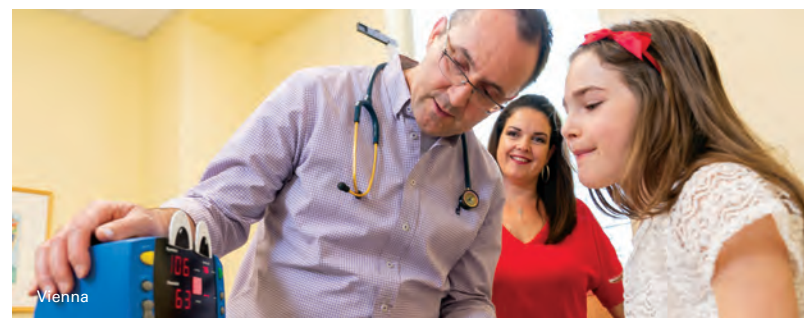
Early diagnosis and prevention of childhood asthma

Asthma is the most common chronic disease of childhood, affecting one in seven Canadian children. Dr. Stuart Turvey of BC Children's Hospital Research Institute, Drs. Michael Kobor and Brett Finlay of the University of British Columbia and Dr. Padmaja Subbarao of The Hospital for Sick Children in Ontario are looking to determine which infants in the CHILD study* are most likely to develop asthma by looking at the absence of key microbes in their stool samples. The team will also look at preventing asthma by developing ways to replace those missing microbes.

**The CHILD Study is a cross Canada initiative where researchers are actively following study participants over time as they grow and develop—from mid-pregnancy into childhood and adolescence.*



Drs. Stuart Turvey, Brett Finlay and Michael Kobor



Vienna

VIENNA'S STORY:

Without subjects, there is no science

Seven-year-old Vienna became part of the CHILD study while her mom, Jennifer, was still six and a half months pregnant. They're one of 3,500 families recruited during pregnancy across Canada to help researchers understand how genes and the environment interact to cause allergies, asthma and other chronic diseases. Thankfully, Vienna doesn't have asthma or any of the other conditions researchers are trying to solve, yet her family's participation is critical. Through home and clinical visits, along with the collection of samples such as umbilical cord blood, breast milk and stool, researchers compare her data to other study participants to gain an in depth understanding of disease. The CHILD study provides a foundational resource to Dr. Stuart Turvey's project: Childhood Asthma and the Microbiome.

CanPREVENT: Reducing the risk of kidney transplant rejection

Transplantation is the optimal treatment for patients with kidney failure, but rejection still causes premature graft loss in as many as 30 per cent of recipients. Drs. Paul Keown and Stirling Bryan of the University of British Columbia, Ruth Sapir-Pichhadze of McGill University and Timothy Caulfield of the University of Alberta aim to cut the rejection rate in half by using genomic technologies to improve the matching of donors and recipients, to monitor the immune response for rejection, and to develop personalized drug treatment regimens for each recipient.



Dr. Paul Keown

ALEISHA'S STORY:

More than anyone should have to endure

Born without parathyroid glands, Aleisha's body was unable to process calcium. Her condition led to several life-threatening conditions including end stage kidney disease. At age 19 a transplant from her mother saved her life, but as is often the case in transplants, the anti-rejection drugs led to several complications, including skin cancer. And still without parathyroid glands, unregulated calcium would eventually lead to another transplant. Before that could happen, Aleisha experienced antibody-mediated rejection. This not only causes premature loss of the transplant, it also makes it more difficult to find another match.

Aleisha spent seven years on dialysis waiting for a second kidney transplant before a rare match was found. Fortunately, she also received a parathyroid gland. Today, her kidney, calcium levels and other vital functions are all within normal range. Dr. Paul Keown and his CanPREVENT team aim to bring a more precise approach to kidney transplant, changing the stories of patients like Aleisha in the future.



Aleisha

Developing genomics-based clinical tests for relapsed lymphoid cancers

Most of the 6,000 annual deaths that result from lymphoid cancers in Canada each year occur when the disease relapses after an initially successful treatment. This makes treating and controlling the symptoms of relapsed disease the most pressing need for these patients. Drs. Christian Steidl, Marco Marra and David Scott of BC Cancer are working to improve the survival rate and quality of life of patients with relapsed lymphoid cancers and reduce treatment costs by developing and implementing genomics-based clinical tests to better guide treatment decisions.



Drs. Marco Marra, David Scott and Christian Steidl



Dr. Richard Hamelin with a hand-held device that runs portable assays designed to perform diagnostics in the field.

Protecting against invasive pests and pathogens

Genome BC invests in genomics research across key economic sectors helping secure healthy markets for BC's industry to thrive. Environmental protection is part and parcel to this effort. For example, researchers are using genomics to investigate how microbes can be used to remediate and reclaim lands from mining operations. Others work to address challenges around aquaculture and fisheries. Genome BC funded initiatives also look to protect BC's agricultural and forest products from invasive pests and pathogens.

In the 3.8 billion years that life has been on the planet Earth, many more species have existed than are alive today. Life is continually evolving, and species are constantly challenged with changing environments. In BC, some of our most economically significant species are struggling to adapt to an influx of invasive pests and pathogens; the result of a changing climate and the increased movement of goods through our global market.

Phytophthora ramorum is a pathogen that can attack hundreds of species of trees and plants, causing diseases

such as Sudden Oak Death and Sudden Larch Death. The Asian gypsy moth is an invasive insect that poses a significant threat to Canada's forests, biodiversity and economy. Both have the potential to cause irreversible damage to the environment if they became established and could be responsible for losses of hundreds of millions of dollars to the Canadian economy, impacting agriculture, forestry, urban and natural environments, as well as international trade. Keeping them out is a top priority for the Canadian Food Inspection Agency (CFIA), the regulatory agency in charge of plant protection.

The detection and identification of these harmful intruders are complicated by the fact that they can be hidden and then transmitted within plants or soil, or as eggs that are impossible to identify accurately using traditional detection methods. With the incidence of pest occurrences on the rise, there was a growing need for innovative tools capable of a more rapid, efficient and accurate identification.

Since 2003, *Phytophthora ramorum* has been detected on plants in several retail and wholesale nurseries in the

southern coastal area of BC resulting in costly treatment and loss of market. This can be avoided by identifying the pests, and their source, before they are loaded in a container, or on a ship and come in to contact with plants and trees in Canada.

Toward this effort, Genome BC and Genome Canada invested in research led by Dr. Richard Hamelin, a professor and forest pathologist at the University of British Columbia, to develop DNA detection tests targeting unique genome regions that provide a more specific level of identification than was previously possible for these harmful pests. The outcome of this investment is a suite of diagnostic tools that provide accurate, efficient, cost-effective, and on site detection of all life stages of these pests in order to support the CFIA's plant protection mandate. Hamelin and his team have also developed portable assays that can be run on a hand-held device to perform diagnostics directly in the field. This tool could significantly enhance the CFIA's regulatory capacity by enabling rapid, on-the-spot identification of invasive species and pathogens.

Genomic tests are being used to identify pathogens and provide information on the pathogen lineage, which can be used to assess the success of eradication efforts and track the source of the pathogen. In 2017, a total of 1,598 plant samples were processed, out of which 27 samples tested positive for pathogens.



Dr. Lauchlan Fraser

Closing gaps

Mining is a key economic sector in Canada, but also has the potential to create disturbances that can impact terrestrial and aquatic ecosystems. In Canada, environmental assessment (EA) is required to identify social and environmental risks before the approval for a mine operation is given. Genome BC is investing in research to explore opportunities to improve successful ecosystem reclamation following a mine closure. A new research project, led by Drs. Lauchlan Fraser and Jon Van Hamme from Thompson Rivers University (TRU) launched an innovative program of applied research that will work with industry associations, regulators and First Nations to improve efficiency and effectiveness of mine reclamation.



Ensuring safety and increasing speed

Canadian nurseries export young strawberry plants in the amount of \$17 million per year. Foreign buyers demand the best varieties of plants. Any substandard product will risk rejection on the export market which has serious knock-on effects to the local economy and puts other markets at risk.

Early detection of viruses in domestic crops is critical. In order to make sure that the plants are healthy, the Canadian Food Inspection Agency (CFIA) tests fruit plants for potentially devastating plant viruses before exportation. Currently, this testing and quarantine process takes an average of three years to complete, significantly hampering the speed of trade.

In an effort to speed this up and accelerate our export market, Genome BC partnered with CFIA and industry groups to demonstrate DNA-based technologies aimed at reducing quarantine testing time by up to two and a half years. The work also looks to develop a way to detect multiple viruses in one single test, dramatically reducing the time and cost to get plants to market.



"Together with provincial partners and industry, our government is making the investments in innovative science that enables agriculture to be a leading growth sector of Canada's economy. Together we can help meet the world's growing demand for high-quality, sustainable food and help grow our middle class."

—The Honourable Lawrence MacAulay, Minister of Agriculture and Agrifood



Breathing life into the economy

Through ongoing dialogue and engagement with industry, Genome BC works to identify areas where the application of genomics and other life science technologies can solve specific biological challenges facing key economic sectors. This has brought engineers, clinicians, software programmers, entrepreneurs and other highly skilled people together, working toward common goals.

As a result, there is an increased recognition of the potential for commercialization of genomic technologies and the creation of new products — particularly as technology costs lower and become more accessible to use toward industrial applications. However, the

path to commercial success is complex and requires expertise and financial support.

Genome BC's commitment to drive commercialization and translation is evidenced by the effort to bring industry and academia together to enhance innovation in BC. We work to mobilize the province's scientific, technical and engineering talent, and strong entrepreneurial base to create and support critical infrastructure.

As applied and translational research continues to provide useful and beneficial outcomes, Genome BC continues to help realize commercial opportunities by supporting programs such as e@UBC, SFU Innovates

and HyperGrowth:Life 2.0, in partnership with the BC Tech Association. These programs help develop a new generation of entrepreneurs through mentorship and advisory support from industry leaders and practicing executives at some of Vancouver's top companies. They provide a critical resource for the acceleration and realization of ideas that produce meaningful social and economic impact in BC, Canada, and the world.

However, an entrepreneurial mindset alone is not enough to bring a great idea to commercial success. Genome BC's Industry Innovation Program (I²) fills a critical gap in the pipeline to commercialization. This one-of-

a-kind program helps companies make financial transitions during the early stages of commercial development — a pivotal time in their evolution. In addition to providing funding, the I² Program's rigorous due-diligence process helps developing companies establish a clear pathway to commercialization with near-term milestones. We also help companies tap into a network of expertise, through senior leaders and resources. The result is a stronger foundation for entrepreneurship and economic development in British Columbia.

Genome BC has helped foster collaboration between academia and industry by building networks and attracting co-investment. The effort has helped advance 74 companies to date, supported BC job growth and contributed to international recognition of British Columbia for its genomics and life sciences capabilities.

Companies advanced through early research technology development



Companies supported through the Industry Innovation program





Checking the pulse of society

The genomics revolution sparked by the end of the Human Genome Project in 2003, has brought forward exponential advancements in life sciences with far-reaching impacts. Fueled by affordable genome sequencing of any living thing, at increasingly higher speeds, scientists are developing knowledge and opening doors that lead to innovative tools and approaches to tackle major challenges such as: adapting to climate change, ensuring food safety and security, developing clean energy and improving health care, to name a few.

However, the rapid advancement of genomics and its uptake in society will certainly raise genuine questions — how our lives may be impacted, and how to ensure the responsible development and application for society's benefit. The public, and policy makers, wrestle with questions regarding privacy protection and discrimination based on genetic data, the potential implications of gene editing and gene patenting, and understanding genetically-modified foods.

Society has an important stake in how technologies evolve and are utilized, but is challenged to keep pace with the rate of change. Yet, it has never been more important to have an informed public

take a participatory role in the progression of science. If genomic solutions are to be responsibly developed and applied to society's challenges, the research and its surrounding dialogue must go beyond the biological science.

The Canadian genomics enterprise (Genome Canada and the six regional centres) continues to strive to ensure societal concerns are thoroughly investigated and society is fully engaged in dialogue to consider the issues. For example, social sciences are fully integrated within large scale 'Genomics' projects to ensure Ethical, Environmental, Economic, Legal and Social aspects (GE³LS) of emerging biotechnologies are investigated and understood. Genome Canada's 2017 competition for Large Scale Applied Research Projects in Precision Health also saw two GE³LS led projects awarded to BC based research teams.

In addition, in 2017, Genome BC piloted its Societal Issues Competition recognizing the need to build capacity in areas that optimize the important contributions that Environmental sciences, Social sciences and Humanities bring to genomics research. The inaugural round of this competition funded four projects within the health sector,

that identify and study issues emerging from genomics-based innovations.

Areas of investigation include: understanding public perceptions about the value attached to genomic knowledge and health care outcomes; the ethical challenges associated with the use of whole genome sequencing in surveillance and outbreak investigations; initiating preliminary conversations with individuals of Indigenous ancestries to understand their perspectives, values, and concerns while raising awareness of under-representation in genomics research; and investigating factors influencing decision making for parents considering genome wide sequencing to identify genetic disorders in newborns in the neonatal intensive care unit at BC Women's Hospital + Health Centre.

Environmental sciences, along with Social Sciences and Humanities are critical to the success of genomics research and assist us in the enhancement of public engagement and dialogue. Providing an opportunity to access unbiased, fact-based information and data is essential to develop informed policy and regulation related to genomics.



Drs. Nadine Caron and Laura Arbour

Silent Genomes: Reducing health care disparities for Indigenous children with genetic diseases

First Nations, Inuit and Métis populations, collectively known as the Indigenous Peoples of Canada, face similar health challenges with global Indigenous Peoples. Inequities include access barriers to health care that produce poorer health outcomes compared to non-Indigenous groups.

The 'genomics revolution' has the potential to widen the health inequities gap. Compared to what is becoming routinely available to other Canadians, Indigenous populations often have little or no access to genomic technologies and the research that drives them, hence intensifying the 'genomic divide'.

A key concern in the growing genomic divide is the lack of background genetic variation data for Indigenous populations living in Canada and globally. This prevents accurate findings because of the lack of reference data needed for precise genetic diagnosis. Notably, standard genomics resources are silent with respect to First Nations, Inuit and Métis. The Silent Genomes project will address the genomic divide by reducing access barriers to diagnosis of genetic disease in Indigenous children.

Silent Genomes is a partnership with First Nations, Inuit and Métis Peoples that will:

- establish processes for Indigenous governance of biological samples and genome data,
- lead to policy guidelines and best practice models, bringing equitable genomic testing to Indigenous children in Canada with suspected genetic diagnosis, and
- develop an Indigenous Background Variant Library of genetic variation from a diverse group of First Nations in Canada.

Drs. Laura Arbour and Nadine Caron of the University of British Columbia and Dr. Wyeth Wasserman of BC Children's Hospital Research Institute will work to narrow the gap by creating a system in which Indigenous Peoples can oversee their own genetic data, enhancing equitable access to diagnosis, treatment, and care. This work aims to improve health outcomes related to genetic disease, while assessing cost effectiveness of precision medicine.



Dr. Alison Elliott

GenCOUNSEL: Optimization of genetic counselling for clinical implementation of genome-wide sequencing

Genome-wide sequencing (GWS) is a powerful new genetic test that analyzes a person's entire genetic make-up. While valuable, it can be problematic, by revealing disorders or disease risk factors unrelated to the original reason for testing, or by generating complex findings that are difficult for non-expert health providers to interpret. While not currently routinely available, genome-wide sequencing will soon be in more widespread use for patients who need it – increasing demand for genetic counselling, to which access is already limited in Canada.

Genetic counselors provide education and emotional and decisional support to patients and families, helping them to make informed decisions about genetic testing and its results.

GenCOUNSEL, led by Dr. Alison Elliott of the BC Children's Hospital Research Institute, brings together experts in genetic counselling, genomics, ethics, health services implementation and health economics, in the first project to examine the genetic counselling issues associated with clinical implementation of GWS. The project's aim is to determine the most efficient socio-economic, clinical, legal and economic methods of providing genetic counselling once GWS is available in the clinic. It will create an understanding of current and future needs for genetic counselling, develop best practices for the delivery of genetic counselling, improve access to the counselling, particularly for underserved patient populations, and develop a framework for the legal recognition of genetic counselors. The result will be increased access, patient satisfaction and cost-efficiency while providing genetic counselling to all Canadians who need it.

Catalyzing innovation

A catalyst is defined as an agent that provokes significant change or action. And just as genomics is a disruptive tool, catalyzing discovery and change in the life sciences, Genome BC serves as an agent of change with regard to developing collaborations and catalyzing partnerships between scientists, government, and industry for the purpose of applying genomic applications for the benefit of BC, Canada and the world.

We are equally as passionate about educating and empowering youth as a critical pathway towards a future of innovation. Working in partnership with the Province, Genome BC has worked hard to influence the high school curriculum, reintroducing genetics into the curriculum with a shift in focus from content to competencies.

Additionally, Genome BC's Geneskool program runs throughout the school year supporting teachers across the province with workshops and hands-on activities aligned to the BC curriculum. Geneskool provides turn-key resources that teach students in grades 9 through 12 about this complex topic in new and interesting ways.

We actively work to keep our programs up-to-date, ensuring that skills-based learning is part of our activities. Our forensics

workshops, in partnership with Capilano University, focus on experiential learning — putting the student in the position of a scientist working in the field. And all reports say that they love it.

As a founding partner of BC's Science Charter, we share a belief that the future wellbeing of BC depends upon a vibrant culture of scientific discovery and technical innovation across our province. Genome BC actively promotes a strong STEAM (science, technology, engineering, art and mathematics) ecosystem, working with Science Charter partners such as Science World and Triumph, as well as community partners like Let'sTalk Science to advance progress for BC's young people.

Genome BC also entered into a multi-year partnership with Science World to support the BodyWorks exhibit, which explores and celebrates the human body. New programming in the gallery was co-developed with Genome BC, to provide a hands-on exploration of DNA, genetics, and the rapidly expanding field of genomics. The Lab Zone is a central hub in the gallery, a place where visitors can engage in storytelling and interactive demonstrations, while learning about cutting-edge research.

Since opening less than a year ago the gallery has seen 469,000 visitors.

Genome BC actively seeks opportunities to engage the community throughout the year like participating in events such as Science World's Teen Tuesdays. And working with the Girl Guides of Canada, we participated in SOAR (Spirit of Adventure Rendezvous). While at the Provincial Specialist Association (PSA) SuperConference, we provided hands-on workshops for teachers.

The public talks we host throughout the year are most popular. The Annual Don Rix Distinguished Keynote Address and GeneTalk speaker series provide the public around the province with direct access to world-class scientists, industry leaders, and patients participating in discussion that enhances understanding and opportunities to learn from one another.

"Geneskool has not only enhanced my knowledge in the world of biology but it has also deepened my interest of sciences. I can genuinely say Geneskool has inspired me to pursue a career in this field."

—**Nicole Greig**, Student

"The activities line up very well with the IB Biology curriculum (biotechnology). I really appreciate the advanced chromatography activity. Without the provided supplies, we couldn't do this in a high school lab. The column chromatography was very interesting and a novel technique for the students to learn."

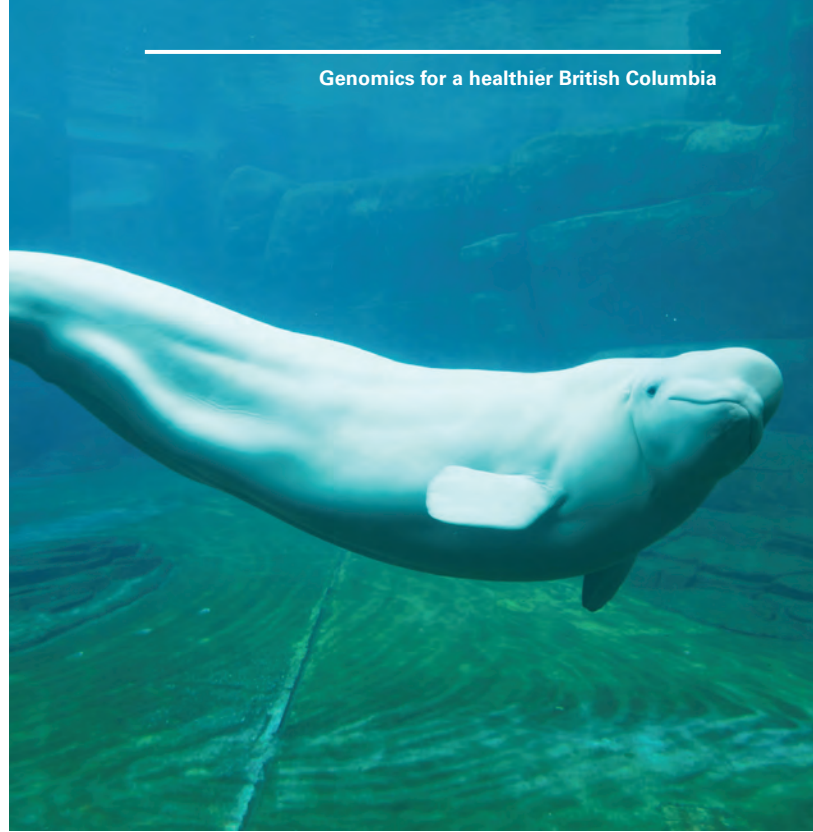
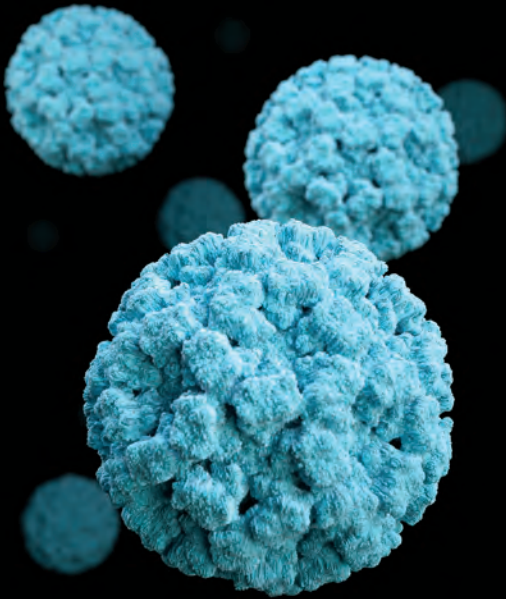
—**Kristy Harris**, Teacher, Semiahmoo Secondary

"Your workshop provides lab work that our small school staff cannot. Thank you, it was much appreciated and needed."

—**Lisa Oike**, Teacher, Boston Bar Elementary-Secondary School



Students perform karyotyping at Genome BC's Geneskool. Karyotyping is a way to see chromosomes inside of cells under a microscope.



Working toward solutions for Norovirus

Genome BC's outreach activities are not limited to public engagement and education. We convene relevant partners in the community to respond to emerging issues and develop action plans. Beginning in November 2016, a series of gastroenteritis cases were reported with links to the consumption of raw oysters. Public health authorities were informed of ~370 cases of foodborne illness from two outbreaks of Norovirus, primarily in BC but extending to Ontario, Alberta and Washington State. As a result, several shellfish areas were closed for harvesting in BC. Public health notices were issued by the British Columbia Centre for Disease Control and the Public Health Agency of Canada, warning of illnesses linked with the consumption of BC raw oysters.

Genome BC hosted a stakeholders' workshop and roundtable discussion on the recent outbreaks. This meeting brought together experts from government, industry, and academia to discuss the challenges presented by Norovirus. The workshop helped to identify gaps in current methodologies and approaches for monitoring for detection of Norovirus in shellfish and concluded a clear need for a rapid and sensitive test to detect norovirus in shellfish. Genomics-derived solutions could potentially play a key role providing an early warning in norovirus surveillance, improving future outbreak investigations. A genomics-based solution could also be developed to provide a low-cost, routine test improving food safety of shellfish products for consumers.

Genome BC's role in bringing together stakeholders to work through emerging issues, like this Norovirus outbreak, is to facilitate the development of a common understanding of the issue within BC and highlight areas where practical solutions could be advanced.

Sequencing the Beluga genome to aid in conservation

When BC suffered a tragic loss with the sudden death of Qila and her daughter, Aurora, the Vancouver Aquarium's beloved beluga whales, many scientific experts stepped forward to offer assistance in finding answers to what caused this heartbreaking loss.

Genome BC reached out to the Aquarium's veterinary team suggesting genomics might help discover what was causing their illness. With funding support from Genome BC, researchers at BC Cancer's Michael Smith Genome Sciences Centre worked with genetic material from the beluga whales who were cared for at Vancouver Aquarium for almost three decades.

The researchers determined neither bacteria nor a virus was responsible. Results of the investigation concluded that the cause of death in both animals was a toxin, although extensive testing was unable to identify the exact substance involved. With the whole beluga genome sequenced, a thorough understanding of beluga genetics may aid conservation efforts for the species, which has been designated at-risk in Canada by the Committee on the Status of Endangered Wildlife in Canada.

2017/18 Societal Engagement Highlights

Genome BC's outreach activities are helping BC's life sciences community to thrive.

Programs like Geneskool engage youth in discovery, while community events and outreach provide opportunities for people of all ages to participate in science and discussion.

Public Engagement/Outreach 2017/18

81

Unique Media Stories

18

Community events

19,821

People reached through events

36

Communities visited through Geneskool

76 Schools visited

7,026 Students engaged

188 Teachers trained



8th Annual Don Rix

8th Annual Don Rix Distinguished Keynote Address, Sharon Terry presented to a sold-out crowd.



12,126

Visits to our booth at the Community Science Celebration

Approximately

469K

visitors to BodyWorks

Genome BC helped shape the Lab Zone – a central hub of the exhibit that explores DNA, genetics and the field of genomics.



Social Media Highlights



9,424 Followers



1,214 Likes



2,785 Followers



1.9M Views



5,252 Subscribers



280 Followers

Message from the President and CEO

Pascal Spothelfer

Genomics is not only a technology of the future; it is a technology of the present.

The relevance of today's genomic applications was on full display in Genome Canada's 2017 Large Scale Applied Research Program competition where investigators were required to work with multidisciplinary partners with a focus on tangible clinical applications including health economists, to ensure benefits to British Columbians and Canadians.

The ability of British Columbia's researchers, clinicians and health economists, to work together, coupled with the expertise of Genome BC's team, led to extraordinary success. Six of the 15 teams funded are from BC — garnering 38% of all competitively available funds. This brings a \$58M investment to our province to advance the positive clinical application of genomics for the purpose of improved patient outcomes and system sustainability.

This success showcases the ideal Genome BC stands for: improving the lives of British Columbians. Through the identification and development of strategic programs, Genome BC works toward building a more robust research and innovation ecosystem that will allow for enhanced capacity and impacts here in BC. Our Sector Innovation Program supports genomic research aimed at the long-term potential to address the needs of key sectors in BC's economy and society. And with an emphasis on researchers new to Genome BC, we are continuing to develop and support our future leaders in this space. Our GeneSolve program looks to strengthen ties between academia and end-users by supporting projects that provide solutions to challenges from industry partners across various sectors.

However, the adoption of genomic applications into society would not be possible without a better understanding of public views and societal impacts. We created the Societal Issues Competition to engage the involvement of social, economic and environmental scientists and to support research that identifies and studies the societal issues that emerge from genomics-based innovations. Education and public engagement are extensions of this work and Genome BC continues to provide opportunities for learning, conversation and policy development through internationally recognized programs such as our Geneskool and GeneTalks initiatives.

We are very thankful for the continued confidence the provincial government has shown in Genome BC, investing another \$17M in support of our five-year \$306M strategic plan. The province has now contributed \$71M to this plan adding to investments made by the federal government, industry and other partners. These funds enable us to maximize investments through Genome Canada programs while strategically investing in provincial priorities.

As we develop our strategy beyond 2020, we are defining our path forward, seeking to remove barriers to adoption while expanding activities toward the direct implementation of genomic solutions. We are exploring new opportunities and actively participating in emerging projects arising from the industry-led Canadian Digital Technology Supercluster, particularly in Precision Health.

We recognize our extraordinary partners in academia, industry, government and other key organizations within our ecosystem — regionally, nationally, and internationally. We appreciate these partners, and in particular, Genome Canada and the six regional genome centres across the country, who collectively have enabled Canada to make distinctive contributions in genomics around the world.

The Genome BC team works very hard to deliver excellence. I am most grateful for the engagement and effort from our people and extremely proud of what we achieve together. We strive for exemplary performance both strategically and operationally. In doing so, we benefit from the guidance of our very supportive and engaged Board of Directors, who volunteer their time and talents to make British Columbia a better place as we realize the benefits of genomics.



Pascal Spothelfer



Ida Goodreau and Pascal Spothelfer

Message from the Board Chair

Ida Goodreau

As progress in genomics continues to advance, each new discovery fuels a better understanding of “omics,” which in turn drives innovative applications that deepen the relevance of genomics for our future.

We are fortunate to work in a province that offers a dynamic environment in “omics” research, and can respond quickly and effectively to strategic and translational opportunities to better the lives of all Canadians. For its part, Genome BC has continually worked to deliver value to British Columbia and Canada by monitoring and measuring the impact of its programs and activities. BC-based research teams were extraordinarily successful in this year’s Genome Canada competitions — this success reflects both a diverse range of genomic applications to health care challenges and BC’s breadth of expertise across many disciplines.

I am continually impressed by the outstanding work and dedication of the Genome BC staff in support of this success and on behalf of the entire board, I applaud their efforts and recognize their success in delivering on a growing number of programs and projects.

As a catalyst for genomics research and innovation, Genome BC’s strength is rooted in the ability to connect people and organizations, bringing a practical approach toward finding solutions to challenges that are important to British Columbians. This strength will be a hallmark

as Genome BC looks to develop its strategy to take the organization beyond 2020.

We are very thankful to the Government of British Columbia for recognizing the importance of this work and supporting the continued implementation of Genome BC’s 2015-2020 strategic plan with an investment of \$17M. Continuing support is essential for Genome BC to be well positioned to drive “omics” to even greater heights in the years to come.

After two years as chair I have the pleasure to hand the baton over to my successor John Thompson. I am sure that John will be as delighted as I was to chair this exceptional board of directors. This board serves Genome BC very well and has enriched my personal experience as a director and chair. Genome BC is an amazing asset for British Columbia and it is a privilege for me and my board colleagues to be deeply committed to the organization.

Ida Goodreau

Independent Auditors' Report

To the Board of Directors of Genome British Columbia

We have audited the accompanying financial statements of Genome British Columbia, which comprise the statement of financial position as at March 31, 2018, the statements of operations and changes in net assets and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion

on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Genome British Columbia as at March 31, 2018, and its results of operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.



Chartered Professional Accountants
June 8, 2018
Vancouver, Canada


Statement of Financial Position (Expressed in Canadian Dollars) March 31, 2018, with comparative information for 2017

	2018	2017
Assets		
Current assets:		
Cash	\$ 770,851	\$ 1,294,056
Short-term investments (notes 3 and 4)	84,675,865	101,216,440
Funding receivable (note 10(a)(ii))	17,090,624	137,264
Other receivables (note 5)	95,476	71,214
Project advances	4,234,498	3,193,307
Prepaid expenses	145,144	135,523
	107,012,458	106,047,804
Capital assets (note 6)	320,689	383,892
	\$ 107,333,147	\$ 106,431,696
Liabilities and Net Assets		
Current liabilities:		
Accounts payable and accrued liabilities (note 7)	\$ 6,571,305	\$ 4,828,491
Deferred lease inducement	117,821	164,949
Deferred contributions:		
Future expenses (note 8)	100,323,332	101,054,364
Capital assets (note 9)	320,689	383,892
	\$ 107,333,147	\$ 106,431,696

Commitments (note 10)

See accompanying notes to financial statements.

Approved on behalf of the Board:


Ida Goodreau
Director


Joe Garcia
Director

Statement of Operations and Changes in Net Assets (Expressed in Canadian Dollars)

Year ended March 31, 2018, with comparative information for 2017

	2018	2017
Revenues:		
Amortization of deferred contributions related to future expenses (note 8)	\$ 33,460,603	\$ 22,455,765
Amortization of deferred contributions related to capital assets (note 9)	143,193	153,521
Investment income	3,014,966	8,912,909
	36,618,762	31,522,195
Expenses:		
Corporate programs and management	7,804,802	7,460,896
Project expenditures	28,670,767	23,907,778
Depreciation	143,193	153,521
	36,618,762	31,522,195
Excess of revenues over expenses, being net assets, beginning and end of year	\$ -	\$ -

See accompanying notes to financial statements.

Statement of Cash Flows (Expressed in Canadian Dollars)

Year ended March 31, 2018, with comparative information for 2017

	2018	2017
Cash provided by (used in):		
Operations:		
Excess of revenues over expenses	\$ -	\$ -
Items not involving cash:		
Depreciation	143,193	153,521
Amortization of deferred contributions related to future expenses (note 8)	(33,460,603)	(22,455,765)
Amortization of deferred contributions related to capital assets (note 9)	(143,193)	(153,521)
Unrealized loss (gain) on short-term investments	1,489,515	(2,690,860)
	(31,971,088)	(25,146,625)
Funding (note 8)	32,762,433	33,904,015
Change in operating assets and liabilities:		
Funding receivable	(16,953,360)	100,733
Other receivables	(24,262)	84,069
Project advances	(1,041,191)	(570,029)
Prepaid expenses	(9,621)	44,566
Accounts payable and accrued liabilities	1,742,814	565,055
Loan receivable	-	200,000
	(15,494,275)	9,181,784
Investments:		
Proceeds from sale of short-term investments	19,500,000	17,215,589
Purchase of short-term investments	(4,448,940)	(26,155,796)
Purchase of capital assets	(79,990)	(71,103)
	14,971,070	(9,011,310)
Increase (decrease) in cash	(523,205)	170,474
Cash, beginning of year	1,294,056	1,123,582
Cash, end of year	\$ 770,851	\$ 1,294,056

See accompanying notes to financial statements.

1. Operations:

Genome British Columbia (the Corporation) was incorporated on July 31, 2000 under the Canada Corporations Act and continued under the Canada Not-For-Profit Corporations Act as a not-for-profit organization and is exempt from income and capital taxes. The Corporation has the following objectives:

- (a) develop and establish a coordinated approach and integrated strategy in British Columbia to enable British Columbia to become a world leader in selected areas of genomic and proteomic research, including agriculture, aquaculture, environment, forestry and human health, among others, by bringing together universities, research hospitals, other research centres and industry, as well as government and private agencies for the benefit of British Columbia;
- (b) participate in national approaches and strategies to strengthen genomics research capabilities in Canada for the benefit of all Canadians;
- (c) create a genome centre in British Columbia to ensure that researchers can undertake research and development projects offering significant socio-economic benefits to British Columbia and Canada, to provide access to necessary equipment and facilities, and to provide opportunities for training of scientists and technologies;
- (d) establish a contractual relationship with Genome Canada, and contractual and collaborative relationships with others (including private and voluntary sectors and federal and provincial governments) in order to provide financial and personnel resources for the Corporation;
- (e) address public concerns about genomics research through the organization of intellectual resources regarding ethical, environmental, legal and societal issues related to genomics; and
- (f) increase public awareness of the need for genomics research and of the uses and implications of the results of such research, thereby helping Canadians understand the relative risks and rewards of genomics.

2. Significant accounting policies:**(a) Basis of presentation:**

These financial statements have been prepared in accordance with Canadian Accounting Standards for Not-for-Profit Organizations (Accounting Standards for NPO's).

(b) Short-term investments:

Short-term investments are recorded at fair value with gains and losses recorded in the statement of operations in the period in which they arise. Short-term investments are comprised of a portfolio of funds managed by investment professionals.

(c) Project advances:

Project advances are comprised of amounts provided by the Corporation to approved research projects and platforms which have not yet been spent.

(d) Capital assets:

Capital assets are recorded at cost. Depreciation is provided using the straight-line method as follows:

Asset	Years
Furniture and fixtures	5
Computers and software	3
Telecommunications equipment	5
Project equipment	3 – 4
Leasehold improvements	remaining lease term

(e) Revenue recognition:

The Corporation follows the deferral method of accounting for contributions.

Externally restricted contributions:

Deferred contributions related to expenses of future periods represent unspent externally restricted funding and related investment income, which are for the purposes of providing funding to eligible recipients and the payment of operating and capital expenditures in future periods. Externally restricted contributions for expenses of a future period and related investment income are deferred and recognized as revenue in the year in which the related expenses are incurred. Deferred contributions related to capital assets represent the unamortized amount of contributions received for the purpose of purchasing capital assets. The amortization of such contributions is recorded as revenue in the statement of operations. Restricted contributions related to the purchase of capital assets are deferred and recognized as revenue using the same methods and amortization rates of the related capital assets.

Unrestricted contributions:

Unrestricted contributions are recognized as revenue when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured.

2. Significant accounting policies (continued):

(f) Commercialization projects:

The Corporation seeks to drive commercialization through partnerships with early stage companies. The Industry Innovation Program (the "Program") was established for the purpose of investing in companies involved in early stage research and development, where technologies have not yet reached commercialization. The value of any underlying security on these investments is limited. The Corporation expenses all amounts invested in these projects as advanced. Recovery of amounts invested are recorded as revenue when the funds are received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured. The Program balance consists of deferred contributions for investment, interest and royalties earned, gains less losses on investments, recoveries from investments less new investment.

(g) Use of estimates:

The preparation of financial statements requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities and the reported amounts of revenues and expenses. Significant areas requiring the use of management's estimates relate to the determination of the useful life of capital assets, accruals for project expenditures and the recoverable amounts of loans receivable. Accordingly, actual results could differ from these estimates.

(h) Valuation of long-lived assets:

If management determines that a capital asset no longer has any long-term service potential to the Corporation, such assets and related deferred contribution balances are written down to their fair values.

(i) Deferred lease inducement:

Tenant inducement received associated with leased premises is deferred and amortized on a straight-line basis over the term of the lease.

(j) Related foundation:

The financial information of Genome British Columbia Foundation, a not-for-profit entity that is commonly controlled by the Corporation, is not consolidated but disclosed in these financial statements.

(k) Financial instruments:

Financial instruments are recorded at fair value on initial recognition. All financial instruments are subsequently measured at cost or amortized cost, unless management has elected to carry the instruments at fair value. The Corporation has elected to carry its short-term investments at fair value.

At period-end, the Corporation assesses whether there are any indications that a financial asset measured at cost or amortized cost may be impaired. Financial assets measured at cost include funding receivable, other receivables and loan receivable. If there is an indicator of impairment, the Corporation determines if there is a significant adverse change in the expected amount or timing of future cash flows from the financial asset. If there is a significant adverse change in the expected cash flows, the carrying value of the financial asset is reduced to the highest of the present value of the expected cash flows, the amount that could be realized from selling the financial asset or the amount the Corporation expects to realize by exercising its right to any collateral. If events and circumstances reverse in a future period, an impairment loss will be reversed to the extent of the improvement, not exceeding the initial impairment charge.

(l) Foreign exchange:

The Corporation's monetary assets and liabilities denominated in foreign currencies are translated into Canadian dollars using exchange rates in effect at the balance sheet date. Revenue and expense items are translated at the rate of exchange prevailing on the date of the transaction. Foreign exchange gains and losses are included in the statement of operations and changes in net assets.

3. Short-term investments:

The Board of Directors has overall responsibility for the establishment and oversight of the Corporation's short-term investments. The Board has established an Investment Committee, which is responsible for developing and monitoring the Corporation's investment policy. The overall objectives of the Corporation's investment policy are to achieve security of principal that ensures a return of the capital invested, to maintain the liquidity necessary to meet the cash flow requirements of the Corporation and to maximize the rate of return without affecting liquidity or incurring undue risk. The policy was updated in December 2015 to expand investment categories to include equities that are publicly traded and listed on major stock exchanges.

The Corporation's short-term investments are comprised of a portfolio of funds and other investments. The portfolio consists of investments in a Canadian money market fund, a bank guaranteed Canadian mortgage fund, a fixed income fund and a Canadian and international equity funds. The portfolio is managed by independent investment professionals in accordance with the Corporation's investment policy. Other investments consist of common shares. All short-term investments are measured at fair value. The Corporation's short-term investments are subject to interest rate, market and liquidity risks.

Both the risk of significant changes in interest rates and the risk of significant changes in market prices are mitigated by the Corporation's policy that permits its portfolio managers to change the level of investment in the funds at short notice and the fact that interest earned on the portfolio is reinvested monthly at prevailing rates. The Corporation limits exposure to liquid asset credit risk through maintaining its short-term investments with high-credit quality financial institutions.

3. Short-term investments (continued):

The Corporation's short-term investments are as follows:

	2018	2017
Money Market Fund	\$ 6,378,321	\$ 14,645,408
Canadian Mortgage Fund	36,080,665	39,950,181
Fixed Income Fund	14,559,656	15,101,453
Canadian and International Equity Fund	27,390,224	31,294,681
Other investments	266,999	224,717
	\$ 84,675,865	\$ 101,216,440

The Canadian Money Market Fund invests in a mixture of Treasury Bills, Bankers' Acceptances, Commercial Paper (minimum R-1 low rating) and bonds (minimum BBB rating) with maturities averaging 60-120 days and a minimum Government of Canada, Provincial or cash holding of 25%.

The Canadian Mortgage Fund invests in first mortgages on Canadian residential real property with loan value ratios of 65% or less. The mortgages are purchased by the fund from a Canadian Chartered Bank and in the event that a mortgage is in default for more than 90 days the bank guarantees both the interest and the principal of the mortgage.

The Fixed Income Fund invests in a mixture of bonds and debentures with a minimum average credit rating of BBB.

The Canadian and International Equity Fund invests in a mixture of Canadian, U.S. and international equities.

Other investments are common shares, converted from subscription rights, in a biotechnology company issued pursuant to a collaborative research agreement in the early development stage. Each subscription right entitled the Corporation to one common share for no additional consideration and was convertible into common shares of the Investee upon certain triggering events or three years from issuance. The subscription rights were converted into common shares in connection with the commencement of trading of the shares of the Investee in an active quoted market in November, 2014.

Fair values of the Corporation's portfolio investments are based on quoted bid price at the reporting date.

4. Industry Innovation Program:

	2018	2017
Balance, beginning of year	\$ 8,950,000	\$ 6,800,000
Funding received	-	4,000,000
Investments in commercialization projects	(2,162,500)	(1,850,000)
Balance, end of year	\$ 6,787,500	\$ 8,950,000

Year	Number of investments	Amount advanced
2017	3	\$ 1,850,000
2018	3	2,162,500
	6	\$ 4,012,500

The program balance consists of deferred contributions which have been invested along with the Corporation's short-term investments (note 3).

Investments in commercialization projects consist of loans which are secured by a general security interest in all assets of the companies. Interest accrues on the outstanding balances at prime plus 3% compounded annually. Repayment of principal and accrued interest over a two year period commences after the earlier of a) an agreed annual gross revenue threshold, b) a change of control of the company; or c) a date that is four years from the date of the loan was advanced. The Corporation may also receive royalty and other payments contingent upon the success of the investee's commercialization efforts and the balance of the loan outstanding.

During the year the Corporation made an advance to an investee company of \$412,500 upon signing an agreement. The Corporation has retained a further \$337,500 which will be advanced to the investee company upon certain conditions, as set forth in the loan agreement, being fully met to the satisfaction of the Corporation.

5. Other receivables:

	2018	2017
Sales tax	\$ 30,751	\$ 27,733
Other accounts receivables	64,725	43,481
	\$ 95,476	\$ 71,214

6. Capital assets:

2018	Cost	Accumulated depreciation	Net book value
Furniture and fixtures	\$ 111,604	\$ 83,767	\$ 27,837
Computers and software	312,398	204,898	107,500
Telecommunications equipment	7,694	5,643	2,051
Leasehold improvements	545,767	362,466	183,301
	\$ 977,463	\$ 656,774	\$ 320,689

2017	Cost	Accumulated depreciation	Net book value
Furniture and fixtures	\$ 102,080	\$ 65,757	\$ 36,323
Computers and software	246,850	158,663	88,187
Telecommunications equipment	7,694	4,934	2,760
Leasehold improvements	545,767	289,145	256,622
	\$ 902,391	\$ 518,499	\$ 383,892

During the year ended March 31, 2018, fully amortized capital assets of \$4,918 (2017 – \$31,813) were removed from the Corporation's accounting records.

7. Accounts payable and accrued liabilities:

	2018	2017
Accounts payable	\$ 130,711	\$ 133,682
Accrued liabilities – projects	5,116,811	3,369,139
Accrued liabilities – others	1,323,783	1,325,670
	\$ 6,571,305	\$ 4,828,491

8. Deferred contributions related to future expenses:

The Corporation receives funding from Genome Canada, the Province of British Columbia, Western Economic Diversification Canada and from other sources to be held, administered and distributed in accordance with the related funding agreements between the Corporation and other parties (note 10).

Deferred contributions related to expenses of future periods represent these unspent externally restricted funding, which are for the purposes of providing funding to eligible recipients and the payment of operating and capital expenditures in future periods. The changes in the deferred contributions balance for the year are as follows:

	2018	2017
Balance, beginning of year	\$ 101,054,364	\$ 89,630,089
Funding received or receivable during the year:		
Genome Canada	15,436,746	12,863,763
Province of British Columbia	17,000,000	20,000,000
Western Economic Diversification Canada	167,259	275,012
Service Canada	3,250	3,135
University of British Columbia	10,000	–
Industry Partners	131,518	370,424
Other	13,660	391,681
	133,816,797	123,534,104
Lease inducement amortization	47,128	47,128
	133,863,925	123,581,232
Less:		
Amount amortized to revenue	(33,460,603)	(22,455,765)
Amount transferred to fund capital assets purchased during the period (note 9)	(79,990)	(71,103)
	(33,540,593)	(22,526,868)
Balance, end of year	\$ 100,323,332	\$ 101,054,364

9. Deferred contributions related to capital assets:

Deferred contributions related to capital assets represent the unamortized amount of contributions received for the purchase of capital assets. The amortization of such contributions is recorded as revenue in the statement of operations and changes in net assets.

The changes in the deferred contributions related to capital assets balance for the year are as follows:

	2018		2017	
Balance, beginning of year	\$	383,892	\$	466,310
Allocation of funding for capital asset purchases (note 8)		79,990		71,103
		463,882		537,413
Less amount amortized to revenue		(143,193)		(153,521)
	\$	320,689	\$	383,892

10. Commitments:**(a) Funding:****(i) Genome Canada:**

The Corporation enters into funding agreements with Genome Canada (the agreements). In accordance with these agreements the Corporation agrees to secure on an on-going basis cash or cash equivalent commitments from other parties representing at least 50% of the total costs of the projects covered by the agreements. In addition, Genome Canada agrees to disburse an amount only up to the amount of the formal commitments from other parties. However, Genome Canada may provide funding notwithstanding the fact that formal commitments from other parties have not yet been secured. Genome Canada has also agreed that funds, provided in good faith, where commitments from other parties have not yet been secured, shall not be reimbursable to Genome Canada.

In accordance with each respective agreement, the Corporation has agreed, among other things, to provide Genome Canada with a co-funding plan for each project. A co-funding plan for each project has been provided to and accepted by Genome Canada.

The list of active research funding agreements with Genome Canada by program, and the supporting commitments from other parties for the active research projects covered by these agreements, as at March 31, 2018, is as follows:

Funding agreement description	Support commitment
2012 Large-Scale Applied Research Project Competition	\$ 15,916,034
Genomic Applications Partnership Program	5,032,559
2014 Large-Scale Applied Research Project Competition	15,296,041
2015 Disruptive Innovation in Genomics Competition	5,071,275
2015 Large-Scale Applied Research Project Competition	20,700,133
2015 Technology Development for the Genomics Innovation Networks	2,070,575
2017 Genomics Technology Platforms	1,679,473

(ii) Province of British Columbia:

In accordance with an agreement for funding received, dated March 30, 2015, and updated on March 24, 2017, the Corporation received funding of \$54,000,000 to support its 2015 – 2020 strategic plan: Powering British Columbia's Bioeconomy. In accordance with the agreement, the Corporation completed and submitted to the funder an accountability framework that included robust and detailed performance metrics on November 27, 2015. The Corporation launched its Industry Innovation Program in October, 2015 as part of its commercialization strategy. Included as part of that strategy, and contingent upon the success thereof, is the intent to repay the Province \$10,800,000 over the next decade (note 4).

A further funding agreement for \$17,000,000 to support the Corporation's 2015–2020 strategic plan was entered into on March 29, 2018. These funds were received in April, 2018.

(b) Project commitments:

In the normal course of business, the Corporation enters into Collaborative Research Agreements for the completion of milestone-based research projects. Detailed below is the estimated remaining commitment of the Corporation's funds relating to active research programs. The Corporation typically provides co-funding to research projects, whereby its funds are combined with funds from other sources to provide the total project award amount. Funds provided directly to the research institution by third parties are included in the total award amount shown in the table below.

10. Commitments (continued):

(b) Project commitments (continued):

The total award amount and estimated remaining commitment of the Corporation by program as of March 31, 2018 is as follows:

Approved programs	Total award amount	Estimated remaining Corporation commitment
Current programs:		
2012 Large-Scale Applied Research Project Competition	\$ 34,036,779	\$ 18,819
2014 Large-Scale Applied Research Project Competition	41,962,926	2,368,794
2015 Large-Scale Applied Research Project Competition	45,002,369	6,084,886
2015 Bioinformatics and Computational Biology	1,249,994	-
Genomic Applications Partnership Program	12,121,677	618,431
2015 Disruptive Innovation in Genomics Competition	8,007,478	556,858
Genome Canada Pilot Projects	13,653,412	376,810
2015 Technology Development	5,926,633	120,186
2017 Genomics Technology Platforms	36,952,992	1,406,081
Applied Genomics Consortium Program	31,193,623	100,490
Human Epigenome (CIHR)	9,978,992	496,494
Transplantation (CIHR)	4,096,203	816,451
Quantitative Imaging Network (CIHR)	3,900,074	531,739
Centre for Drug Research and Development Fund	4,823,919	308,259
Brain Canada (MIRI 1 & 2)	9,176,572	134,571
Brain Canada (Alzheimer's)	7,042,580	20,650
Brain Canada (PSG)	1,391,750	22,314
Strategic Opportunities Fund	14,305,078	72,546
Strategic Opportunities Fund for Industry	6,745,443	85,302
User Partnership Program	12,775,337	1,148,592
Societal Issues	199,914	64,979
Sector Innovation Program	1,938,074	1,534,093
Genome British Columbia Pilot Programs	45,602,365	3,879,017
ScienceWorld British Columbia Outreach Program	200,000	114,284
	352,284,184	20,880,646
Closed programs:		
Competition I	42,707,207	-
Competition II	43,502,482	-
Competition III	100,153,663	-
Competition in Applied Genomics Research in Bio-products or Crops	24,346,330	-
International Competition	12,881,913	-
Applied Genomics and Proteomics in Human Health	44,099,840	-
Applied Genomics Innovation Program	24,437,610	-
Translational Program for Applied Health	17,891,275	-
New Technology Development Projects	5,509,566	-
WED Programs	10,713,337	-
Science and Technology Platforms	71,061,922	-
Technology Development Initiatives Fund	706,536	-
Other Pilot Programs	3,561,133	-
Advancing Technology Innovation through Discovery	5,702,315	-
Personalized Medicine Program	8,168,169	-
2010 Large-Scale Applied Research Project Competition	56,374,386	-
Human Microbiome (CIHR)	4,827,122	-
Entrepreneurship Education in Genomics Program	979,966	-
2012 Bioinformatics and Computational Biology	5,276,029	-
2015-2017 Science and Technology Platform	7,999,946	-
WED – Proof of Concept	10,029,751	-
	500,930,498	-
Total	\$ 853,214,682	\$ 20,880,646

10. Commitments (continued):

(c) Operating lease and management agreements:

The Corporation has entered into operating lease agreements for office premises and management contracts which expire at various dates until September 30, 2020. Minimum payments for the next three fiscal years are as follows:

2019	\$	505,038
2020		505,038
2021		252,518
Total	\$	1,262,594

11. Genome British Columbia Foundation:

Genome British Columbia Foundation (the Foundation) is a registered charity established to promote and foster life sciences research for the public benefit by coordinating, sponsoring and carrying educational conferences, seminars, workshops and symposiums. The Foundation is exempt from income and capital taxes.

The majority of the Foundation's Board of Directors are also members of the Corporation, and as such, the Corporation is presumed to control the Foundation. In accordance with the CPA Canada Handbook Section 4450, the Corporation has chosen not to consolidate the Foundation but has followed the disclosure requirements. The Corporation has no economic interest in the Foundation.

Financial information of the Foundation as at March 31, 2018 and 2017 and for the years then ended are as follows:

	2018		2017	
Cash	\$	64,724	\$	100,313
Accounts payable and accrued liabilities		-		(19,525)
Deferred contributions		(64,724)		(80,788)
Net assets	\$	-	\$	-
Revenues	\$	16,072	\$	19,525
Expenses		(16,072)		(19,525)
	\$	-	\$	-
Cash provided by (used in):				
Operations	\$	(35,589)	\$	(26,628)
Funding		-		-
Investing		-		-
Net change in cash	\$	(35,589)	\$	(26,628)

There are no significant differences in accounting policies between the Foundation and the Corporation.

12. Financial risks:

(a) Liquidity risk:

Liquidity risk is the risk that the Corporation will be unable to fulfill its obligations on a timely basis or at a reasonable cost. The Corporation manages its liquidity risk by monitoring its operating requirements. The Corporation prepares budget and cash forecasts to ensure it has sufficient funds to fulfill its obligations. There has been no change to the risk exposures during the year ended March 31, 2018.

(b) Credit risk:

Credit risk refers to the risk that a counterparty may default on its contractual obligations resulting in a financial loss. The Corporation deals with creditworthy counterparties to mitigate the risk of financial loss from defaults. There has been no change to the risk exposures during the year ended March 31, 2018.

(c) Market risk:

Market risk is the risk that changes in market prices, as a result of changes in foreign exchange rates, interest rates and equity prices, will affect the Corporation's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while maximizing the return.

(i) Currency risk:

Investments in foreign securities are exposed to currency risk due to fluctuations in foreign exchange rates. The Corporation is exposed to currency risk on its foreign currencies held within its cash accounts and through its investments in the International Equity Fund.

(ii) Interest rate risk:

Interest rate risk is the risk that the fair value of the Corporation's investments will fluctuate due to changes in market interest rates.

(iii) Other price risk:

Other price risk relates to the possibility that the fair value of future cash flows from financial instruments will change due to market fluctuations (other than due to currency or interest rate movements). The diversification across various asset classes is designed to decrease the volatility of portfolio returns.

There have been no changes to the exposure to market risk during the year ended March 31, 2018.

Corporate Information

Board of Directors

(For fiscal year ended March 31, 2018)

Ida Goodreau

Chair
Former CEO, Vancouver Coastal Health

John F.H. Thompson

Vice Chair
Consultant, PetraScience Consultants Inc.
and Professor, Cornell University

Pascal Spothelfer

President and Chief Executive Officer
Genome BC

Lenard F. Boggio

Retired Partner
PricewaterhouseCoopers LLP

Neena L. Chappell

Professor Emeritus
Institute on Aging & Lifelong Health and
Department of Sociology
University of Victoria

Jock Finlayson

Executive Vice President & Chief Policy
Officer
Business Council of British Columbia

Joseph Garcia

Partner, Blake, Cassels & Graydon LLP

Margaret (Peggy) Johnston

Senior Program Officer
Bill & Melinda Gates Foundation

Jeffrey Reading

First Nations Health Authority Chair
Heart Health and Wellness at St. Paul's
Hospital Cardiology
Professor, Faculty of Health Sciences
Simon Fraser University

John Shepherd

Past Director, Leukemia/Bone Marrow
Transplant Program of BC
University of British Columbia

Gavin Stuart

Professor, Faculty of Medicine
University of British Columbia

Greg Taylor

President, Fish First Consulting

Paul Terry

Chief Technology officer
PHEMI

Board Observers

Heather Davidson

Assistant Deputy Minister
Partnerships and Innovation Division
Ministry of Health, Province of British
Columbia

Doug Kinsey

Executive Director (Pacific Region)
Innovation, Science & Economic
Development Canada

Marc LePage

President and Chief Executive Officer
Genome Canada

Management

Pascal Spothelfer

President and Chief Executive Officer

Tony Brooks

Chief Financial Officer and Vice President
Entrepreneurship & Commercialization

Catalina Lopez-Correa

Chief Scientific Officer and Vice President,
Sectors

Suzanne Gill

Executive Director, Corporate Development

Sally Greenwood

Vice President, Communications and
Societal Engagement

Auditors

KPMG LLP
Vancouver, BC

Legal Counsel

Richards Buell Sutton LLP
Vancouver, BC

Thanks to our Funders

Genome BC thanks its funding partners including the Province of British Columbia, the Government of Canada through Genome Canada and Western Economic Diversification Canada, and project co-funders.

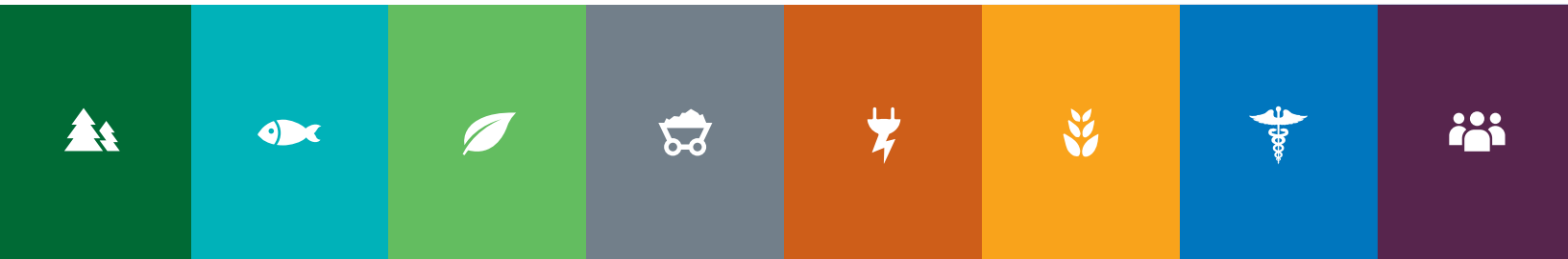
Acknowledgements

We would like to thank all those who assisted in developing this annual report, including the management and staff at Genome BC, Genome BC funded researchers, and the Carter Hales Design Lab team.



Western Economic
Diversification Canada

Diversification de l'économie
de l'Ouest Canada



Genome British Columbia
400–575 West 8th Avenue
Vancouver, BC V5Z 0C4
Canada

Tel 604 738 8072
Fax 604 738 8597
genomebc.ca



Aug 1 / 2018
circulated by
email SEI + Jaxon G.

July 27, 2018

Mr. Chris Mazurkewich
Chief Executive Officer
Interior Health Authority
505 Doyle Avenue
Kelowna, BC V1Y 0C5

Dear Mr. Mazurkewich,

On behalf of the Health Science Association's 18,000 members in over 60 professions and disciplines, I am pleased to share the Final Report and Recommendations from our April 2018 Primary and Community Care Conference – *Achieving High-Performing Primary and Community Care: The Critical Role of Health Science Professions*.

Too often in BC's public health care system there is a disconnect between frontline clinicians and decision-makers who are responsible for making policy decisions that affect patients and the health care workforce. With the Ministry of Health's vision to move towards an integrated system of team-based primary and community care and implementation underway in health authorities, we felt it would be critical for decision-makers to hear directly from health science professionals about what's working and what's not.

This research report is based on a synthesis of themes arising from the facilitated conference workshops and panel discussions as well as a review of the relevant academic and policy literatures. We hope you find this information useful in your work.

Please do not hesitate to contact us should you have any questions or would like to discuss the report and its recommendations.

Sincerely,

Val Avery
President
HEALTH SCIENCES ASSOCIATION OF BC
VA:pm
Encls.

Executive Summary

On April 13, 2018, over 70 Health Sciences Association (HSA) members, representatives from professional associations, Ministry policymakers, health authority decision-makers, researchers, family physicians and primary care advocates came together at BC's first-ever multidisciplinary primary and community care conference focused on the contributions of the health science professions¹ (see *Appendix D: Conference Program*).

In high-performing health systems internationally, there has been a greater focus on recognizing and optimizing the roles of public-practice health science professionals (hereafter, "HSPs") working in public in order to improve health services and population health outcomes. The HSA conference – *Achieving High-Performing Primary and Community Care: The Critical Role of Health Science Professions* – provided participants with an opportunity to better understand the different and critical roles of HSPs in primary and community care, as well as the barriers and opportunities for making interprofessional team-based care a reality for British Columbians in communities large and small, rural and urban.

The morning began with an opening welcome from Elder Roberta Price from the Snuneymuxw and Cowichan Nations, followed by opening remarks from HSA President Val Avery and the Honourable Judy Darcy, Minister of Mental Health and Addictions. Minister Darcy spoke about the critical role HSPs play in providing interprofessional team-based mental health and addictions care, including Foundry youth mental health and wellness centres that have opened across the province.

During the morning workshop (see Appendix A), HSA members discussed the unique roles of their disciplines in providing care to individuals with mental health and substance use issues and the frail elderly – two groups that require improved access to multidisciplinary team-based primary and community care, but too often end up in hospitals because comprehensive care and supports are not available.

Throughout the morning and afternoon panel discussions (see Appendix D and *Learning from the Canadian experience and high-performing systems internationally* section), conference participants learned about promising models of team-based care in which HSPs play integral roles. Social worker Elise Durante discussed the Vancouver Granville Foundry Centre and how staff work as an integrated team, with a focus on the social determinants of health, to meet the needs of youth with mental health and addictions issues. The Foundry is also designed to meet the primary care needs of youth who may otherwise not have access to a primary care provider or team.

Physiotherapist Chris Petrus highlighted how the Home Visits to Vancouver's Elders (Home ViVE) program provides 24-7 primary care to frail elders and reduces hospital visits. Health system consultant Cindy Roberts and Vancouver Coastal Health VP of Community Services Yasmin Jetha spoke about key ingredients to designing, implementing and sustaining unique and creative team-based programs, including the need for clinicians to take ownership over service redesign in order to sustain improvements.

¹ Health science professions are often referred to as, and part of the larger grouping of, "allied health professions".

Within the context of BC's ongoing overdose crisis, frontline clinicians from recreation therapy, family medicine, physiotherapy, occupational therapy, and social work identified challenges to, and opportunities for, strengthening team-based addictions care based on their experience working in innovative, low-barrier programs.

The day concluded with a panel discussion of lessons from BC and internationally on policy changes that can help BC overcome barriers to implementing interprofessional and multidisciplinary team-based primary care. Panelists discussed the importance of system-level changes, such as alternatives to fee-for-service physician compensation that facilitate team-based care; organizational structures to better support and engage frontline clinicians in implementing collaborative team models; and increasing community governance in primary health care, including the Ontario Community Health Centre model. Panelists included Professor Kimberlyn McGrail (UBC), Pam Mulroy (Northern Health), Adam Lynes-Ford (BC Health Coalition and Catherine White Holman Wellness Centre), and Marcy Cohen (Canadian Centre for Policy Alternatives).

Many participants remarked that the day was full of learning and stimulating discussions, and provided a unique opportunity to make new connections, especially between frontline practitioners and policymakers.

Based on a synthesis of conference workshops, panel discussions, participant feedback and a review of the relevant peer-reviewed and policy literatures, HSA identified the following key themes/lessons and policy recommendations.

Key Themes and Lessons

1. Health science professionals are critical members of primary and community care teams.
2. Health science professionals have important insight into what's working and what's not in primary and community care for frail seniors and individuals with mental health and addictions issues.
3. The lack of a province-wide approach to professional and interprofessional team development is a barrier to effective interprofessional teamwork.
4. The inability to work to full scope of practice is a concern and frustration expressed by many health science professionals across disciplines and public practice settings.
5. Public sector recruitment and retention challenges – contributing to shortages and heavy workloads for health science professionals – undermine effective teamwork and each profession's ability to work to full scope.
6. Health science professionals are committed to improving BC's integrated system of primary and community care – but they need to be recognized for their contributions and supported as leaders and improvement champions.

7. Promising and evidence-based practices and models of team-based care often suffer from the lack of a coordinated approach to scale up and spread innovations and improvements province-wide.

Recommendations

1. Learn from what is working and what is not on interprofessional primary and community care teams in BC and internationally. Apply those lessons in a coordinated, province-wide and ongoing manner by implementing a top-down and bottom-up approach to health system governance and improvement.
2. Establish a *Health Science Professions Policy Secretariat* in the BC Ministry of Health as a necessary step to recognize, support and develop the roles of health science professionals in BC's integrated system of interprofessional primary and community care.
3. Address urgent public sector shortages for health science professions.
4. Immediately expand training seats for health science professions, beginning with those identified as current priority professions by the Ministry of Health.
5. Develop a vision and strategy for public-practice health science professionals based on outreach and consultation with frontline health science professionals.

Thank you to all HSA members, conference attendees and speakers for your thoughtful contributions and ideas, which made the report and recommendations possible. Achieving an integrated system of high-performing primary and community care built around interprofessional teams is no small task. We hope that the conference and recommendations contribute to positive change and ongoing dialogue that includes health science professionals, decision-makers, patients and communities.