GENERAL FACULTIES COUNCIL
AGENDA

Meeting #600, October 8, 2020, 1:30-4:30 p.m.   By Zoom platform

Item	Description	Presenter	Materials	Estimated Time
1.	Conflict of Interest Declaration	McCauley	Verbal	1:30
2.	Remarks of the Chair – Annual Address of the Chair	McCauley	Verbal	
3.	Remarks of the Vice-Chair	Marshall	Verbal	
4.	Question Period	McCauley	Verbal	
5.	Safety Moment	Ghali[1]	Document	
	Action Items			
6.	Approval of the June 11, 2020 Meeting Minutes	McCauley	Document	
7.	Approval of 2020-2021 Work Plans • GFC Executive Committee • Academic Planning and Priorities Committee • Research and Scholarship Committee • Teaching and Learning Committee	McCauley/Marshall Marshall/Beattie[2] Thompson[3]/Knight[4] Reid[5]/Warren[6]	Document	2:10
8.	Elections • Two Academic Staff Members to an Advisory Review Committee for the Dean of the Faculty of Law • Two Academic Staff Members to an Advisory Selection Committee for a Dean of the Faculty of Veterinary Medicine (elections to be held by email following the meeting)	McCauley/Belcher	Document	2:20
	Discussion Items			
9.	Growth Through Focus Vision	McCauley	PowerPoint	2:25
10.	Academic Staff Criteria and Processes Handbook – Part I	Smith[7]/Strzelczyk[8]	Document	2:55
11.	Revisions to the Sexual Violence Policy	Book[9]	Document	3:25
	Information Items			
12.	Child Health and Wellness Research Strategy	Benseler[10]/Ghali/Pexman[11]	Document + PowerPoint	3:40

Item	Description	Presenter	Materials	Estimated Time
13.	Standing Reports: a) Report on the September 16, 2020 GFC Executive Committee Meeting b) Report on the June 8, June 22, July 21, and September 28, 2020 Academic Planning and Priorities Committee Meetings c) Report on the September 17, 2020 Research and Scholarship Committee Meeting d) Report on the September 15, 2020 Teaching and Learning Committee Meeting e) Report on the September 22, 2020 Senate meeting f) Policy Development Update	In Package Only	Documents	4:10
14.	Revised Teaching and Learning Committee Terms of Reference	In Package Only	Document	
15.	Revised Research Ethics Appeal Board Terms of Reference	In Package Only	Document	
16.	Other Business	McCauley		
17.	Adjournment Next meeting: November 5, 2020	McCauley	Verbal	4:10

Regrets and Questions: Elizabeth Sjogren, Governance Coordinator
Email: esjogren@ucalgary.ca

Susan Belcher, University Secretary
Email: sbelcher@ucalgary.ca

GFC Information: https://www.ucalgary.ca/secretariat/general-faculties-council

Presenters

1. William Ghali, Vice-President (Research)
2. Tara Beattie, Academic Co-Chair, Academic Planning and Priorities Committee
3. Robert Thompson, Co-Chair, Research and Scholarship Committee
4. Andy Knight, Academic Co-Chair, Research and Scholarship Committee (TBC)
5. Leslie Reid, Co-Chair, Teaching and Learning Committee
6. Amy Warren, Academic Co-Chair, Teaching and Learning Committee
7. Francine Smith, Co-Chair of the Academic Staff Criteria and Processes Working Group
8. Florentine Strzelczyk, Co-Chair of the Academic Staff Criteria and Processes Working Group
9. Deborah Book, Legal Counsel
10. Susa Benseler, Director, Alberta Children's Hospital Research Institute
11. Penny Pexman, Associate Vice-President (Research)

Flu shots on Campus

- Oct 19th - Oct 23rd Staff Wellness will be providing vaccinations for Staff and Faculty at mass clinics on two campuses.
- This year, Staff Wellness estimates over 1000 Staff and Faculty will be vaccinated during this clinic.

Last year, a total of 3915 vaccinations were administered at UCalgary:

- 1587 Staff and Faculty
- 2392 Students

What is Influenza:

Influenza is a highly contagious respiratory infection.

The flu virus is spread

- mainly from person to person when those with influenza cough or sneeze (droplet spread) . The droplets are propelled about 3 feet through the air.
- Through close contact with others
- Through contact with contaminated surfaces

Those at greatest risk for influenza-related complications:

- young children
- pregnant women
- indigenous peoples
- adults >65 years of age
- people with medical conditions or chronic illnesses
- those who live in nursing homes or chronic care facilities

Influenza symptoms typically include sudden onset of:

- high fever (usually lasting 3-4 days)
- cough
- muscle aches and pains (often severe)

Other common symptoms include:

- headache
- chills
- fatigue (can be severe; can last weeks)
- loss of appetite
- sore throat
- coryza (inflamed nasal membrane)

Every year in Canada, influenza is responsible for:

- 12,000 hospitalization
- 3,500 deaths
- 1.5 million effective workdays lost

Immunization

Immunization against influenza is the best way to prevent seasonal flu

- new strains of influenza appear every year. This is a reason why immunization is required **ANNUALLY**.
- influenza vaccines **CANNOT** give you influenza
- influenza vaccines are **SAFE** and **REDUCE** the spread of influenza viruses.

Impact:

Over 1.5 million effective workdays are lost each year in Canada.

$1 **billion** in work related and healthcare costs each year in Canada

Risk of "Twindemic"

"Twindemic" is a term referring to the risk of a substantial increase in Influenza cases occurring at the same time as the COVID-19 pandemic. One physician from B.C.'s Centre for Disease Control, Dr. Danuta Skowronski, stated that influenza vaccine uptake is especially important this year, not only to reduce "unnecessary testing" for COVID-19, but to reduce the risk of people using hospital beds for Influenza that could be used for COVID-19. The medical director of infection prevention and control at Kingston Health Sciences Centre in Ontario, Dr. Gerald Evans, stated his concern that hospitals could be overwhelmed by an increase in COVID-19 cases and Influenza cases during flu season. Both physicians are recommending an increased uptake in flu shots.

Differences between COVID19 and Influenza

COVID19 and Influenza are spread in the same way – through droplets – but there are some major differences between COVID19 and Influenza.

- Influenza has a shorter incubation period of 3 days (period between when a person has the virus in their body and when the person develops symptoms); COVID-19 has an incubation period of 5-6 days
- Children are more likely to spread Influenza, whereas adults are more likely to spread COVID – 19
- The populations most at risk of severe Influenza infection are children, pregnant women, the elderly, those who are taking immunosuppressants, and the elderly; COVID-19 usually affects older adults most severely
- COVID-19 is much more infectious than influenza, but it is difficult to create a direct comparison as infection with both viruses appear to be very time specific and tend to depend on context

References and additional information:

https://www.who.int/westernpacific/news/q-a-detail/q-a-similarities-and-differences-covid-19-and-influenza

https://www.albertahealthservices.ca/assets/healthinfo/hi-flu-influenza-orientation.pptx

https://www.cbc.ca/news/health/flu-vaccine-covid-19-twindemic-what-you-need-to-know-1.5709559

https://www.ctvnews.ca/health/a-double-whammy-doctors-concerned-about-twindemic-as-flu-season-approaches-1.5099822

https://lab.research.sickkids.ca/task/wp-content/uploads/sites/66/2018/06/2015-04-Influenza-FULL-REPORT.pdf

The draft Minutes are intentionally removed from this package.

Please see the approved Minutes uploaded separately on this website.

**GENERAL FACULTIES COUNCIL
ACTION BRIEFING NOTE**

◉ For Approval   ○ For Recommendation   ○ For Discussion

SUBJECT: **2020-2021 Work Plans: GFC Executive Committee, Academic Planning and Priorities Committee, Research and Scholarship Committee, Teaching and Learning Committee**

MOTION:

> That the General Faculties Council (GFC) approve the 2020-2021 Work Plans for the GFC Executive Committee (EC), Academic Planning and Priorities Committee (APPC), Research and Scholarship Committee (RSC), and Teaching and Learning Committee (TLC), in the forms provided to the GFC, and as recommended by the EC, APPC, RSC and TLC respectively.

PROPONENT(S)

Ed McCauley, General Faculties Council (GFC) Executive Committee (EC) Chair
Dru Marshall, EC Vice-Chair and Academic Planning and Priorities Committee (APPC) Co-Chair
Tara Beattie, APPC Academic Co-Chair
Robert Thompson, Research and Scholarship Committee (RSC) Co-Chair
Andy Knight, RSC Academic Co-Chair
Leslie Reid, Teaching and Learning Committee (TLC) Co-Chair
Amy Warren, TLC Academic Co-Chair

REQUESTED ACTION

The GFC is being asked to review and approve the 2020-2021 work plans for the EC, APPC, RSC and TLC.

KEY CONSIDERATIONS

The work plan informs the Committee and GFC members about the anticipated work of the Committee for the 2020-2021 academic year, and provides a tool through which the Committee can measure its progress.

BACKGROUND

Based on the best information known at the time, GFC committees prepare annual work plans for approval at the start of each meeting year.

ROUTING AND PERSONS CONSULTED

Progress	Body	Date	Approval	Recommendation	Discussion	Information
	Teaching and Learning Committee	2020-09-15		X		

	Committee	Date			
	GFC Executive Committee	2020-09-16		X	
	Research and Scholarship Committee	2020-09-17		X	
	Academic Planning and Priorities Committee	2020-09-28		X	
X	General Faculties Council	2020-10-08	X		
	Academic Planning and Priorities Committee	2020-10-19			X
	Teaching and Learning Committee	2020-10-20			X
	GFC Executive Committee	2020-10-21			X
	Research and Scholarship Committee	2020-10-22			X

NEXT STEPS

The approved work plans will be circulated as an in-package item for the Committees' information. The GFC will receive regular reports on the business addressed at the Committees' meetings.

SUPPORTING MATERIALS

1. EC 2020-2021 Work Plan
2. APPC 2020-2021 Work Plan
3. RSC 2020-2021 Work Plan
4. TLC 2020-2021 Work Plan

GENERAL FACULTIES COUNCIL EXECUTIVE COMMITTEE (EC)
WORK PLAN 2020-2021

		Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1	Appointment/Nomination Work (as needed)	▓	▓	▓	▓	▓	▓	▓	▓	▓
2	Review and Recommend the 2020-2021 EC Work Plan to the General Faculties Council	▓								
3	Review the Draft GFC Agendas	▓	▓	▓	▓	▓	▓	▓	▓	▓
4	Review of Academic-related Policies, Procedures, Codes, etc. (as needed)	▓	▓	▓	▓	▓	▓	▓	▓	▓
5	Approval of Revisions to GFC Standing Committee, Faculty Council, and Other Appropriate Terms of Reference (as needed)	▓	▓	▓	▓	▓	▓	▓	▓	▓
6	Growth Through Focus Vision		▓	▓	▓	▓		▓		▓
7	Academic Staff Criteria and Processes Handbook Revisions	▓	▓	▓						
8	Universal Student Ratings of Instruction (USRI) Working Group Recommendations		▓	▓	▓					

		Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
9	Recommendation of Revisions to the Sexual Violence Policy			▨						
10	Approval of the 2021-2022 and 2022-2023 GFC and GFC Standing Committees Meeting Schedules					▨				
11	Recommendation of the Establishment of the 2021-2021 GFC Membership Distribution					▨				
12	Determine the Format for the 2020-2021 GFC Member Evaluation					▨				
13	Annual Committee Performance Review and Review of the EC Terms of Reference									▨

ACADEMIC PLANNING AND PRIORITIES COMMITTEE (APPC)
WORK PLAN 2020-2021

		Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
1a.	Quality Assurance Unit Review Reports for: • Social Work • Werklund School of Education • Science • Law	▓					▓	▓	▓	▓	▓
1b.	Mid-Term Quality Assurance Unit Review Reports for: • School of Architecture, Planning and Landscape • Faculty of Arts • Graduate College	▓	▓								
2.	Review and Recommend 2020-2021 APPC Work Plan to the General Faculties Council (GFC)	▓									
3.	Approve Academic Program Subcommittee, Calendar Curriculum Subcommittee, Graduate Academic Program Subcommittee and Campus and Facilities Development Subcommittee 2020-2021 Work Plans		▓	▓							

		Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
4.	Review of National Survey of Student Engagement Action Plan Report						�				
5.	Report of the Student Ombuds						▓				
6.	Global Engagement Plan 2020-2025 Progress Report									▓	
7.	APPC Committee Evaluation for 2020-2021 Academic Year						▓	▓			▓
8.	Review and Recommend Academic-related Policies, Procedures to GFC	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
9.	Approve Program Proposals, University Admission Standards and University Regulations	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓

UNIVERSITY OF CALGARY

RESEARCH AND SCHOLARSHIP COMMITTEE (RSC)
WORK PLAN 2020-2021

		Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1.	Review and Recommend the 2020-2021 RSC Work Plan to the General Faculties Council	■								
2.	Info: Updates on Strategic Research Themes (as fitting)	■	■	■	■	■	■	■	■	■
3.	Info: VPR Catalyst Grants Program	■								
4.	Info: Eyes High Postdoctoral Match-Funding Program	■								
5.	Info: Research Management System – Tri-Agency Programs Implementation	■								
6.	Info: Indigenous Research Support Team (IRST)		■							
7.	Info: Research Services Update		■							
8.	Info: Industry Liaison Office		■							
9.	Discussion: San Francisco Declaration on Research Assessment (DORA)			■						
10.	Info: Refreshed Mandate of the Hunter Hub			■						

		Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
11.	Discussion: Dimensions Equity, Diversity and Inclusion (EDI) Pilot Update				▓					
12.	Info: Energy 2.0 Research Strategy				▓					
13.	Info: Research Management System Update				▓					
14.	Info: Innovation Ecosystem Updates					▓				
15.	Info: Interdisciplinary Science and Innovation Centre (ISIC) Building					▓				
16.	Discussion: Research Impact Assessment						▓			
17.	Info: High Performance Computing / Secure Research Computing						▓			
18.	Discussion: Indigenous Research Update							▓		
19.	Info: Research Metrics							▓		
20.	Info: University Travel Device Loaner Program								▓	
21.	Annual Committee Performance Review and Review of the RSC Terms of Reference									▓

TEACHING AND LEARNING COMMITTEE (TLC)
WORK PLAN 2020-2021

		Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1.	Review and Recommend 2020-2021 TLC Work Plan to General Faculties Council	�								
2.	Discussion: CoVID Updates in Teaching and Learning	▪	▪	▪	▪	▪	▪	▪	▪	▪
3.	Discussion: CoVID Updates from TLC Members	▪	▪	▪	▪	▪	▪	▪	▪	▪
4.	Discussion: Review of Online Assessment and Exam Regulations	▪				▪				
5.	Discussion: Feedback on Exam Invigilation Platform		▪							
6.	Info: Presentations and updates (TBD) - Indigenous Strategy, Mental Health Strategy - Academic Lead in Research in Teaching and Learning - Learning Technologies Advisory Committee - External Teaching Awards - EDI and Teaching and Learning and Malinda Smith		▪	▪	▪	▪	▪	▪	▪	▪
7.	Disucssion: Carnegie Community Engagement Pilot Project Update			▪						

		Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
8.	Discussion: Review of Course Outline Regulations			▓						
9.	Discussion: Certficiate Framework				▓					
10.	Discussion: Review of the 2020 National Survey of Student Engagement (NSSE) Action Plan Report					▓				
11.	Discussion: Racism, Anti-Racism in Teaching and Learning					▓				
12.	Info: Taylor Institute Annual Report					▓				
13.	Discussion: Common Grade Conversion Scheme (% to Letter Grade)						▓			
14.	Info: USRI Working Group Updates	▓	▓	▓	▓	▓	▓	▓	▓	▓
15.	Discussion: Curriculum Review Reports, as available	▓	▓	▓	▓	▓	▓	▓	▓	▓
16.	Identification of Communication Points from TLC Meetings	▓	▓	▓	▓	▓	▓	▓	▓	▓
17.	Annual Committee Performance Review and Review of the TLC Terms of Reference									▓

GENERAL FACULTIES COUNCIL
Biographies of Candidates for Elections

Two elections will be held by email vote immediately following the October 8, 2020 General Faculties Council meeting.

These are the biographies of the candidates who were nominated by the GFC Executive Committee and have agreed to stand for election:

8a   Election of Two Academic Staff Members to an Advisory Review Committee for the Dean of the Faculty of Law

Rei Safavi-Naini, Faculty of Science

Professor
Recipient:
- NSERC/Telus Industrial Research Chair in Information Security(current)
- Alberta Innovate Strategic Chair in Information Security(current)
- iCORE (Informatics Circle of Research Excellence, Province of Alberta) Chair in Information Security (past)

Service (U of C):
- Director of Information Security Lab (current)
- (co-)Founding Director of Institute for Security, Privacy and Information Assurance, and serving as Director until January 2019.
- Committee member: Department of Computer Science Research and Planning Committee, Graduate Committee, Scholarship Committee (current)

Service (Canada – past years):
- NSERC Discovery Program Selection Committee
- NSERC Banting Postdoctoral Fellow Selection Committee
- Chair of NSERC Site Visit Committees

Service (International- past years, including 2020):
- US National Science Foundation Grant Selection Panels (SaTC (Secure and Trustworthy Cyberspace) Panels, Math Panel, Career Panel)
- Australian Research Council Grant Selection Committee

Professional Service (International- past to present):
I have served as the Program Chair of top international conferences in cryptography and information security and Associate Editor of multiple IEEE and ACM Transactions in information security. I have served, and currently serving, as program committee member of conferences in cryptography and information security.

Short Bio: Reyhaneh Safavi-Naeini joined University of Calgary in 2007 as the iCORE Chair in Information Security. Before that she was a Professor of Computer Science and the Director of Telecommunication and Information Technology Research Institute (now ICT Research Institute) at the University of Wollongong Australia.

She received her PhD from University of Waterloo, Canada, and BEng and MSc from University of Tehran. She has over 400 refereed publications.

Her current research interests are cryptography, information theoretic security, quantum-safe cryptography, network and communication security and privacy, and Cloud security and privacy.

Janet Ronsky, Schulich School of Engineering

Bio coming

Erin Gibbs Van Brunschot, Faculty of Arts

Professor of Sociology and Director of CMSS. My research areas are risk, criminal behaviour and social control. I have received SSHRC, Alberta Justice, and AGRI research funding. I have served on many University-level committees, including: Program Coordination Committee (member and chair); Academic Program Committee (member and chair); General Merit Committee Appeals Sub-Committee (chair); Provost's Faculty Bargaining Team; to name a few. Examples of faculty-level service includes: Reader for Faculty of Arts Convocation ceremonies; Faculty of Arts Strategic Planning Committee (co-chair); Faculty of Graduate Studies Full Council; former Vice-Dean and Head of Sociology.

Hussein Warsame, Haskayne School of Business

Professor
Recipient: SSHRC grant; CPA Education Fund grants; CPA Faculty Fellow of Taxation
Recipient: U of C Students' Union Teaching Excellence Award; U of C Commerce Teaching Excellence Award; CPA Teaching Excellence Awards (2 of them); U of C PhD Supervisory Award.
Past service: U of C Senate; Director, Master of Public Policy; Area Chair MIS and Accounting
Current service: Accounting Area chair, Haskayne School of Business; Faculty representative, GFC; GFC Executive Committee.

8b   Election of Two Academic Staff Members to an Advisory Selection Committee for a Dean of the Faculty of Veterinary Medicine

David Hansen, Faculty of Science

Professor
Recipient: AHFMR Scholar Award; NSERC Discovery (current); NSERC Accelerator; CIHR operating (Current); CFI New Opportunities Award
Recipient: University of Calgary Teaching Award; Faculty of Science Award for Excellence in Teaching, Killam Award Graduate Supervision and Mentorship Award, UCalgary U Make a Difference Award
Past Service: UCalgary Presidential Search Committee; Faculty of Science Decanal Search Committee; Assistant/Associate Dean FGS (Supervisory Development and Scholarship); CFI Support Review Committee; Killam Scholarship Review Committee; Faculty of Science Executive Committee; Co-organizer 8th Cdn Dev Bio Conference; 16 Faculty Search Committees in Faculty of Science and Cumming School of Medicine
Current Service: Head, Department of Biological Sciences

Aidan Hollis, Faculty of Arts

Professor.
Grants: PI of numerous CIHR, SSHRC, and other grants. Principle applicant on CIHR One Health Global Governance Network; PI on Alberta MIF One Health AMR consortium.
Current Service: One Health @U of C Executive Committee; Economics Graduate Studies Committee; Arts Appeals Committee.
Previous Service: GFC, GFC Executive Committee

- President of Incentives for Global Health, New Haven, USA;
- Member, Expert Advisory Group, Global AMR R&D Hub. 2019-2020.
- Member, World Health Organization Guideline Development Group on the use in food animals of critically important antimicrobial agents for human medicine, 2016-17.

Guido van Marle, Cumming School of Medicine

Associate Professor
Recipient: CFI, CIHR, CCCR, Alberta Forestry and Agriculture, Teaching and Learning, UIGC grants.
Recipient: Canadian Association for Medical Education Certificate of Merit, Killam Award undergraduate student research mentorship, Students' Union Teaching Excellence Award (2X), Bachelor of Health Sciences Education Innovation Award , Alberta Internationalizing Teaching and Learning Practice Award of Distinction (co-awardee).
Past Service: Graduate Education Committee MDMI graduate program, Curriculum Committee Chair BHSc program, Health Science Animal Care Committee.
Current Service: Director International Partnerships in the Indigenous, Local & Global Health Office. co-Director Biomedical Sciences for the Bachelor of Health Sciences Program. Faculty Representative for the Associate Deans Council International, Vice Provost International.

Michael Kallos, Schulich School of Engineering

Professor
Recipient: NSERC, CIHR, NIH, AIHS, CFI, ASRIP, and the Bill and Melinda Gates Foundation grants and Member, McCaig Institute for Bone and Joint Health
Recipient: Killam Annual Professor (2017); ASTech Leader of Tomorrow Award; teaching awards (incl. "Professor of the Year" and "Outstanding Excellence in Teaching"(x5)); Schulich School of Engineering Service Award (2013, 2005); Calgary Top 40 Under 40;
Past UofC Service: ASC Dean FGS, ASC Dean SSE; Faculty of Environmental Design FTPC; Schulich AARC; UCEE Board; Department of Math and Statistics Head Selection Advisory Committee; Director, BME Graduate Program
Current UofC Service: Director, BME Calgary Initiative; SSE and Dept. Chem and Pet Engg Research Committee; SSE Centre for Bioengineering Research and Education Assoc. Dir.

GENERAL FACULTIES COUNCIL
ACTION BRIEFING NOTE

○ For Approval   ○ For Recommendation   ● For Discussion

SUBJECT: **Academic Staff Criteria and Processes Handbook - Part I**

PROPONENT(S):

Florentine Strzelczyk, Deputy Provost, Academic Staff Criteria and Processes (ASCP) Working Group, Administrative Co-chair
Francine G. Smith, Cumming School of Medicine Professor, ASCP Working Group, Academic Co-chair

REQUESTED ACTION

The ASCP Working Group is seeking feedback on Part I of the new Academic Staff Criteria and Processes Handbook (which will henceforward be referred to as The Handbook) and which contains:
- a preamble;
- provisions regarding the creation and updating of Faculty Guidelines;
- definitions regarding the three major functions in which academic staff engage
  - i.e. research and scholarship, teaching, and service;
- expectations for academic staff in different ranks and streams;
- criteria for renewal, tenure and promotion;
- criteria for merit assessment.

In particular, we would like feedback from the General Faculties Council (GFC) on the appropriateness of criteria in the context of an increasingly competitive environment and a high-achieving, ambitious professoriate.

KEY CONSIDERATIONS/POINTS

Provisions of the current Handbook

The current Handbook, which was passed at GFC in the spring of 2019, is largely made up of those portions of the Appointment, Promotion and Tenure (APT) and General Promotions Committee (GPC) manuals that remained after materials on processes related to tenure, promotion and assessment were removed and inserted into the Collective Agreement, with minor additions and deletions.

The current Handbook:

- contains criteria for assessment, renewal, transfer, tenure, promotion and appointments (Part I), and academic appointments selection procedures (Part II); and

- authorizes Faculty Councils to develop Faculty Guidelines to ensure the distinctive aspects of various disciplines are addressed in the application of the criteria.

Provisions of the revised and updated Handbook – Part I

In the newly revised and updated Handbook – Part I, the yellow highlighted sections refer to new wording not contained in previous versions APT/GPC manuals; double strikeouts demark proposed deletions; black text marks the sections of the Handbook proposed to remain.

The newly revised and updated Handbook contains both new sections (e.g. Preamble), as well as largely revised sections (e.g. Faculty Guidelines). The general requirement section now includes a more detailed description of the different activities across the academy, that relate to the various forms of research and scholarship, along with expanded updated definitions of teaching and service. Ranks and streams have been more clearly delineated outlining expectations for an academic staff member within a stream and across different ranks. In addition, criteria for Renewal, Tenure and Promotion, have been expanded to include more definition regarding what is required for an academic staff member to move through the ranks. Finally, merit assessment more clearly articulates the ways in which an academic staff member should be assessed for the purposes of assigning merit.

The newly revised and updated Handbook – Part I is slated to come to GFC for discussion on October 8th with the plan to return for approval the following month.

RISKS

Faculties have not updated their guidelines for some time while the negotiations concerning the pieces of the Handbook were pending. It is important for this revised Handbook – Part I to be approved and passed as soon as possible in order to ensure that academic staff members can be tenured, promoted and assessed using clearly articulated criteria. It is also important to note that much of the current language in the existing Handbook relating particularly to research & scholarship and to teaching, is outmoded and outdated so that updating much of this language will improve interpretation of criteria, requirements and guidelines.

RESOURCE REQUIREMENTS

The Handbook working group has scheduled meetings every two weeks since its inception in summer of 2019, and continued meeting throughout the summer of 2020, to speed up the work on the new, updated Handbook – Part I. Revisions to Part II, GFC Academic Appointment Selection Procedures, are well under way and will be brought forward in as timely a manner as possible.

BACKGROUND

The APT Ad Hoc Committee was established in 2011 in response to the negotiations occurring between the Board of Governors and the Faculty Association with regard to a) tenure and promotion procedures, and b) merit assessment procedures. The Committee was charged with *"revamping the APT and GPC Manuals to revise and separate out the various processes in light of tentative agreements reached between the Governors and TUCFA regarding tenure and promotion processes"* and with "*preparing a first draft of a document specifying criteria for tenure and promotion, drawn primarily from the APT and GPC Manuals, for consideration by GFC."* The APT Ad Hoc Committee completed its work and prepared a criteria document drawn primarily from the APT and GPC manuals, resulting in the recommendation of the creation of the Handbook in spring of 2019. **Criteria** for tenure, promotion, and assessment, in other words, remain under the authority of the GFC, whereas the **processes** related to tenure, promotion, and merit assessment were incorporated in the Collective Agreement. With the creation of the Handbook, an Academic Staff Criteria and Processes Handbook Working Group was established under GFC Executive to update the Handbook. Part I of the new Handbook is the item for discussion today.

ROUTING AND PERSONS CONSULTED

Progress	Body	Date	Approval	Recommendation	Discussion	Information
	Associate Deans Teaching & Learning Roundtable	2020-01-30			X	
	Associate Deans Research Council	2020-02-05			X	
	Dean's Council	2020-09-05			X	
	Vice-President Research OPS	2020-09-14				
	GFC Executive Committee	2020-09-16			X	
	Associate Deans Teaching & Learning Roundtable	2020-09-19			X	
X	General Faculties Council	2020-10-08			X	
	GFC Executive Committee	2020-10-21		X		
	General Faculties Council	2020-11-05	X			

Persons and other groups consulted:
- Leslie Reid, Vice Provost Teaching & Learning / Susan Mide-Kiss, Project manager, Carnegie Project, November 15, 2020.
- Penny Pexman, Associate Vice President Research, December 13, 2020.
- Michael Hart, Vice-Provost Indigenous Engagement, April 27, 2020.
- Mary Jo Romaniuk, Vice Provost - Libraries and Cultural Resources, June 8, 2020.
- John Brown, Dean of SAPL, June 10, 2020.
- Sandra Davidson, Dean of Nursing, June 10, 2020.
- Baljit Singh, Dean of Vet Med., June 10, 2020.
- Faculty Association Executive, June 16, 2020.
- Dru Marshall, Provost, September 5, 2020.
- Malinda Smith, Vice Provost - Equity, Diversity, Inclusion, September 14, 2020.

NEXT STEPS

After discussion by GFC, this document will be resubmitted to the GFC Executive Committee with recommended changes and request for approval by GFC (November). If the document meets the approval of GFC, the revised Handbook – Part I will be made available to academic staff members for future use in tenure and promotion and merit assessment cycles. Since this is a standing committee, the document can be revisited at any time for further revisions.

SUPPORTING MATERIALS

Newly revised and updated Academic Staff Criteria and Processes Handbook, Part I [dated September 30, 2020]. The document contains the recommended changes resulting from the discussion at GFC Executive on September 16, 2020.

UNIVERSITY OF
CALGARY

HANDBOOK

GFC Academic Staff

Criteria & Processes

Handbook

Part I DRAFT

September 30, 2020

The following pages form a draft of Part I of the GFC ASCP Handbook. Text highlighted in yellow is new. Text shown as strike-through is deleted. Remaining text is taken from the current Handbook dated April 2019 with references shown in brackets below each clause.

Preamble

The University of Calgary is a research-intensive institution committed to discovery, creativity and innovation with aspirations for excellence, achievement, and high academic standards. To this end, the University provides leadership to society and guides the evolution of new ideas that contribute to quality of life for Albertans, Canadians, and people worldwide.

The University values the pursuit and creation of knowledge and diverse knowledge traditions. Striving for scholarly advancement in all disciplines, the University is committed to advancing innovation, discovery, entrepreneurship, and knowledge engagement, to the benefit of our communities. In its commitment to innovative teaching and learning, the University educates the next generation to tackle society's challenges in an increasingly complex world.

By creating and maintaining a positive and productive environment committed to equity, diversity and inclusion, the University promotes a culture where all members have the greatest potential to thrive and welcome the freedom to learn, experience, investigate, comment, critique, and contribute to society locally, nationally, or internationally.

The contents of this Handbook shall be applied in the spirit of addressing barriers that inhibit Indigenous peoples, racialized, queer, trans- and gender- nonconforming, women and other systematically disadvantaged scholars from achieving their full potential.

The Handbook's contents shall also be applied as consistent with the principles of due process and balance procedural transparency as well as the protection of an individual's right to privacy. As well, the Handbook's contents should allow for flexible interpretation in order to achieve fairness towards all academic staff members.

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PART I

Criteria for ~~Merit Assessment,~~ Renewal, Transfer, Tenure, Promotion, Merit Assessment, and Appointment~~s~~

1 Authority

1.1 These criteria are established pursuant to Article 29.2 and Article 28.4 of the Collective Agreement between the Faculty Association of the University of Calgary and the Governors of the University of Calgary. In accordance with these Articles, the General Faculties Council (GFC) is empowered to establish ~~the~~ criteria for ~~merit assessment,~~ ~~r~~Renewal, ~~t~~Transfer, ~~t~~Tenure and ~~p~~Promotion ~~m~~as well as Merit ~~a~~Assessment.

1.2 ~~The c~~Criteria in this document shall also be used for appointments made in accordance with the Handbook.

1.3 ~~The c~~Criteria for ~~the assessment,~~ appointment and reappointment as well as assessment of members in Sessional Appointments shall be established in the Collective Agreement.

1.4 ~~Every academic staff member participating in procedures relating to aAppointment, Merit Aassessment, Renewal, tTenure, renewal, or and pPromotion has the responsibility to consider as relevant oOnly~~ criteria established or authorized by the GFC or provided within the *Collective Agreement* can be considered in matters relating to (a) Appointment, (b) Renewal, Transfer, Tenure and Promotion, and (c) Merit Assessment.

1.5 For the purposes of Merit Assessment, changes made to criteria within this Handbook and/or the relevant Faculty Guidelines shall only apply from the approved date forward.

1.6 For the purposes of applying for Renewal, or for Tenure, as set out in Article 28 of the Collective Agreement, an academic staff member may choose to be evaluated under current approved criteria in both this Handbook and Faculty Guidelines, or those in place at the time of appointment. An academic staff member who applies for promotion not linked to an application for tenure may choose to be evaluated under approved criteria in both this Handbook and Faculty Guidelines, or under criteria in effect three years prior to the promotion application date, or the date of hire, whichever is later.

2 Faculty Guidelines

2.1 Discipline specific criteria will be outlined in Faculty Guidelines for each Faculty across the University. ~~In establishing these criteria, the General Faculties Council is exercising its authority under~~ According to Articles 29.2 and 28.4 of the *Collective Agreement*, GFC has ~~to~~ delegated the creation of Faculty Guidelines to the Faculty Councils to ensure ~~the~~ that any discipline specific or distinctive aspects ~~of various disciplines~~ relevant to its faculty members are addressed ~~in the application of~~ when applying ~~the~~ criteria for Appointment, Renewal, Transfer, Tenure and Promotion, as well as Merit Assessment. [Current Handbook I.2.1]

2.2 Criteria outlined within this Handbook, may be refined and interpreted in Faculty Guidelines. ~~While the faculty Guidelines may refine and interpret GFC's criteria they~~ Faculty Guidelines may not, however, create new criteria, or add to, contradict, or delete, ~~create new~~ criteria, unless specifically authorized to do so within this Handbook ~~document~~. [Current Handbook I.2.1]

2.3 Following approval by the Faculty Council, ~~Each~~ the Dean shall make available to academic staff members ~~appointees~~ in the Faculty, ~~following approval by the Faculty Council,~~ such approved Faculty Guidelines on the manner in which ~~the~~ criteria for Appointment, Renewal, Transfer, Tenure and Promotion as well as Merit Assessment shall be ~~are~~ applied within the Faculty. [Current Handbook I.4.5.4]

2.4 ~~Such~~ Faculty ~~g~~Guidelines must include a statement or description: [Current Handbook I.4.5.4]
   a) ~~a statement~~ of the relative importance that the Faculty attaches to ~~each of the three~~ University functions ~~(teaching, research, service)~~ of research and scholarship, teaching, and service;
   b) ~~a description~~ of how the Faculty interprets the~~se~~ functions~~, e.g.~~ (i.e. the various activities that the Faculty defines as legitimate and appropriate ~~forms of expression~~ research and scholarship activities including creative and/or artistic activity); knowledge engagement and transfer (the ways in which public and private sectors benefit from research); entrepreneurship; innovation; and that clearly articulates any expectations with regard to competitive and other types of funding;
   c) the relative weighting of the activities outlined in a) and b) as defined by the discipline or field applicable to academic rank and stream;
   d) of how the Faculty assesses other duties such as clinical or professional responsibilities, where applicable;
   e) of how the Faculty assesses contributions to service as well as administrative duties;
   f) ~~(c) a description~~ of how the Faculty assesses the information supplied within a Teaching Dossier (see also Article 28A of the *Collective Agreement*); ~~applies external information such as evaluations by students~~;
   g) that clearly articulates how and when the Faculty credits scholarly work in various stages of publication;

h) ~~d) a description of the~~ of expectations ~~that the Faculty has of an academic appointee's performance~~ with respect to performance in each ~~of the three~~ functions by academic staff members, including the ways in which these expectations change within rank, and with seniority within a given rank (see Article 29.2.6 of the *Collective Agreement*);

i) ~~f) a statement about~~ of how academic and professional qualifications are applied in recommend~~ing ations for~~ Appointment, Renewal, ~~promotion, and~~ Tenure and Promotion, as well as Merit Assessment;

~~g) a clear indication of: i. how accomplishments in teaching, research, and service are translated into recommendations for tenure; ii. how accomplishments in teaching, research, and service are translated into recommendations for promotion from rank to rank.~~

j) that clearly articulates how accomplishments in research and scholarship, teaching, and service as well as any other assigned duties shall be translated into recommendations for Appointment, Renewal, Tenure and Promotion, as well as Merit Assessment within the respective streams present in the Faculty;

j) of how Faculty Guidelines address variations in applying criteria across units, where applicable and consistent with Articles 29.5.6 and 29.7.5 of the *Collective Agreement*;

k) that clearly describes how academic staff members will be credited for activities carried out in other departments within the Faculty, as well as in other Faculties;

l) of the ways in which the Faculty recognizes the diversity of different career patterns and the implications of such patterns for career progression and evaluation of progress;

m) of the ways in which the Faculty recognizes systemic barriers that may prevent academic staff members from equity-seeking groups to achieve career milestones such as Tenure and Promotion at the same rate and speed, as well as achievements through Merit Assessment. Examples are explicit and implicit service expectations, implicit bias surrounding publication quality, community engagement as a pre-requisite for research and scholarship, and/or cognitive and implicit bias influencing application of criteria in Renewal, Tenure, Promotion as well as in Merit Assessment.

n) of the Academic Selection Committee Composition outlined in Part II of this Handbook (see II.5.1)

2.5 ~~2.2~~ Changes to Faculty Guidelines shall not take effect until:

a) ~~the guidelines are~~ approved by the Provost as being in compliance with this ~~document~~ Handbook and the *Collective Agreement*;

b) a copy is provided to the Faculty Association, and

c) the changes are posted on the Provost's website.
[Current Handbook I.2.2]

3 Criteria for Research and Scholarship, Teaching, and Service ~~4 General Requirements for Academic Staff (Teaching and Research)~~

3.1 General Considerations

3.1.1 It is the responsibility of all academic staff members to contribute to a climate in which diversities of opinions and views are valued. This will enable all to participate in decision making and advancing the goals of the University. ~~Colleagueship should be considered to the degree that it can be shown to have affected the teaching, research, or service of the individual, colleagues, or the unit.~~ [Current Handbook I.4.5.1]

3.1.2 ~~4.1~~ The functions of the University ~~are Teaching, Research and Service~~ include research and scholarship, teaching, and service and shall be evaluated as part of Renewal, Tenure and Promotion (see I.5), as well as included in Merit Assessment (see I.6). In some instances, academic staff members may undertake clinical responsibilities or other professional activities and/or duties that go beyond these three categories, reference to and assessment of which, may also be included in Faculty Guidelines (see I.2.4 a), and c). General criteria for ranks and streams as well as Professional or Administrative appointments are set out in I.4 below. ~~There is an expectation that all academic appointees (Teaching and Research) shall engage in these activities (with the exception of the instructor ranks and the rank of Lecturer).~~

~~The general criteria for each function as applied to all ranks as well as the specific criteria for each rank are set out below.~~ [Current Handbook I.4.1]

3.1.3 ~~4.5.2~~ Within the context of ~~Section 4.1~~ I.3.1.2 above, and the requirements of the *Collective Agreement* Article 29.2.2, it is recognized that the nature of ~~teaching,~~ research, and scholarship, teaching, and service and the proportional distribution of expectations ~~among the three functions~~ for fulfilling these functions shall vary from Faculty to Faculty, and where activities within these functions focus on ethical obligations to build community relations before research and scholarship activities can occur. [Current Handbook I.4.5.2]

3.1.4 ~~4.5.3~~ There shall be generally consistent application of these considerations ~~expectations~~ throughout each Faculty. [Current Handbook I.4.5.3]

3.2 Research and Scholarship

3.2.1 ~~4.3.2~~ Research, and scholarship are major University functions. ~~and other creative activities constitute a major University function.~~ The primary concern of ~~the individual~~ academic staff members and the University shall be the importance of high-quality ~~work.~~ research and scholarship and/or other creative or professional activities. [Current Handbook I.4.3.2]

3.2.2. Research and scholarship, and/or other creative or professional activities may include:

a) fundamental research that creates new knowledge including research creation, and creative practice;

b) integration of knowledge which involves the synthesis of information across disciplines, and across topics within a discipline;

c) research that involves entrepreneurship and/or innovation;

d) systematic study of teaching and learning processes, including the scholarship of teaching and learning;

e) application of knowledge to critically analyze texts, identify or solve a compelling problem in the community or challenge in society including knowledge engagement and transfer (the ways in which public and private sectors benefit from research), patents, and commercialization;

f) Knowledge creation grounded in or engaged with Indigenous nations, communities, societies or individuals that embraces the intellectual, physical, emotional and/or spiritual dimensions of knowledge and interconnected relationships with people, places and the natural environment. It is committed to building respectful relationships with Indigenous communities, valuing their existing strengths, assets and knowledge systems, and striving to meet community needs, through ethically and culturally appropriate means.

3.2.3 Research and scholarship may take place individually or collaboratively and focus on one or more disciplines. High-quality research and scholarship will be measured by peer recognition and/or advancement to the discipline, and/or innovation, and/or creativity, and/or impact on society and community etc.

3.2.4 Activities in research and scholarship vary among Faculties, and across disciplines and fields, encompassing a number of different modes and activities, creative or professional achievements in different ways consistent with disciplinary culture and practice and as delineated in the relevant Faculty Guidelines. ~~4.3.3.These research activities shall be evaluated on a regular basis and shall~~ Such activities shall normally be measured by the quality ~~and~~ originality, innovation, impact, entrepreneurial spirit, knowledge engagement and community impact, as well as the pattern of the academic ~~appointee's~~ staff member's work ~~through media and outlets~~ appropriate to ~~each~~ the discipline, field, or community. ~~for communication with peers~~. [Current Handbook I.4.3.3].

3.2.5 It is expected that academic staff members, as required by their rank and stream, shall actively participate in the evolution of their disciplines and professions, to remain current in their

fields, and to disseminate the scholarly outcomes of their work in a variety of forms appropriate to their discipline or field.

3.2.6 In their particular fields of endeavor, academic staff members are expected to meet ethical standards for research and scholarship, to adhere to university policies with respect to ethical conduct, and to act with integrity and honesty in conducting and communicating their scholarly work.

3.2.7 Academic staff members are normally required to seek competitive funding to sustain their program of research and scholarship where applicable, as defined in the relevant Faculty Guidelines (see I.2.4 b).

3.2.8 The relative weighting of types of research and scholarship output may vary by discipline, or field (see I.2.4 c). For example, in some disciplines, publication of an article in a top-tier journal or a refereed book in a national or international press is the summit of scholarly achievement. Some fields may require extensive efforts in community building before research and scholarship can occur. Knowledge engagement, including Indigenous research and scholarship, or entrepreneurial activities may result in different outputs, impact, and innovation. In other disciplines, presentations, lectures, and/or keynote addresses at international conferences, publications in conference proceedings or editing a journal, carry greatest weight. In others, the number and value of external, competitive grants received, and/or research contracts awarded are important indicators of research and scholarly activity. Similarly, a patent, contributions to policy, or a juried exhibition of artistic work may indicate significant creative and/or professional achievement.

3.2.9 ~~4.3.5~~ In ~~those~~ Faculties that prepare students for professional practice, contributions to the discipline of that profession shall be deemed relevant to satisfying ~~the~~ research and scholarship requirements provided that they are of high quality and are acknowledged contributions to the field, that they flow primarily from research and scholarship, and that they have been subject to an informed ~~peer~~ review process and enhance the professional reputation of the ~~individual~~ academic staff member and the University. [Current Handbook I.4.3.5]

3.3 Teaching

3.3.1 ~~4.2.1~~ Teaching is a major University function. ~~It is recognized that teaching or instruction takes place in various contexts appropriate to the disciplines in each Faculty including the classroom, lectures, seminar discussion, clinical supervision, laboratory supervision, tutorials, graduate supervision, field supervision, practicum supervision, distance education, collaborative teaching with associated institutions, the advising of students, etc.~~ The purpose of teaching is facilitate learning. Teaching effectiveness is characterized by high-impact teaching and learning strategies to improve student learning and includes a demonstrated ability to apply evidence-

based teaching and learning approaches, and to design learning experiences grounded in a clearly articulated teaching philosophy. [Current Handbook I.4.2.1]

3.3.2 Teaching may take different forms such as direct or classroom instruction at undergraduate and graduate levels, competency-based education, field and practicum supervision. The supervision or co-supervision, and mentoring, of undergraduate or graduate students, or other trainees, as well as participation on supervisory committees, and/or serving as an external examiner are other forms of teaching contributions of academic staff members.

3.3.3 Teaching activities may consist of lectures, seminars, tutorials, laboratories, clinical sets, lesson plans, assessments, grading and examinations. Delivery of instruction may be face-to-face, on-line and blended. Learning may occur inside and outside of the classroom, on and off campus, including land-based education, in collaboration with other instructors, associated institutions, community organizations or with Indigenous knowledge-keepers and communities.

3.3.4 Educational leadership is a dimension of teaching that advances innovation of teaching and learning with impact beyond the classroom, including contributions to curricular development and renewal, pedagogical innovations, evidence-based and/or practice-based educational activities including Indigenous teaching practices, the sharing of pedagogical expertise through publications, or formal educational leadership roles in the academic unit or beyond.

3.3.5 ~~4.2.6~~ The University also recognizes the legitimate role of academics to collaborate with partners in knowledge creation and innovation, or as 'knowledge brokers' in transferring ~~state-of-the-art~~ new knowledge and innovations to persons in government, business, industry, the professions, and ~~the wider~~ broader communit~~y~~ies through the organization and presentation of seminars, workshops, and short courses. ~~for persons outside programs leading to degrees~~.
[Current Handbook I.4.2.6]

~~4.2.7 The development, testing, and application of computer-assisted learning techniques and software shall be deemed to be innovative teaching when the techniques or software have been successfully integrated into the teaching of University course offerings and the usefulness of the activity has been acknowledged by informed peers in a manner similar to the peer review of materials submitted for publication.~~ [Current Handbook I.4.2.7]

3.4 Service

3.4.1 Academic staff members have a responsibility to contribute through service to move the institution forward through collegial governance, to advance academic disciplines, and to impact communities and society. ~~4.4.1 Since the University is a community of scholars, largely responsible for its own governance, it is expected that each academic appointee shall make contributions in the area of service. Service shall be measured by the academic appointees record~~

of active participation Service means active participation and shared responsibility in academic governance, and development in matters relevant to the progress and welfare of the academic staff member's dDepartment, uUnit, the fFaculty, and the iInstitution, discipline, and profession. [Current Handbook I.4.4.1]

3.4.2 The degree and number of service activities to which an academic staff member contributes may vary depending on career stage as well as rank and stream. 4.4.5 Appropriate levels of service shall be expected of each rank. Nevertheless, for individuals whose duties include research and scholarship as well as teaching and research, the normal expectations for research and scholarship as well as teaching and research cannot be fulfilled by service activity in the absence of written agreements with the Dean. Meeting the expectation for service should normally require a smaller portion of effort than is required for the functions of research and scholarship as well as Tteaching and Research. [Current Handbook I.4.4.5]

3.4.3 Service to the University may include participation in Program or Unit-level, Department or Division, Faculty, and University committees, councils, task forces, *ad hoc* teams, and governing bodies, or other parts of the University including the Faculty Association.

3.4.4 Service to an academic staff member's disciplines or profession may include membership on committees or executive bodies of academic or professional organizations, 4.4.2 Service may also be measured by informed assessment of evidence of substantial contributions to activities such as service on editorial boards of disciplinary or interdisciplinary journals, national or international granting agency councils, on grant selection committees and adjudication panels of regional, provincial, regional national or international agencies, and similar professional activities involvement. Service may also involve organization of conferences, seminar series, workshops or presentation of short courses within the university, the broader community, or within the national and/or international arena. [Current Handbook I.4.4.2]

3.4.5 Service to the community and general public takes place in several forms. Public or community service involves the contribution of an academic staff member's professional and disciplinary expertise to the community and public-at-large in association with their University appointment. Academic staff members may contribute to general, professional, or cultural communities, the province, and the nation, as well as globally, by reciprocal application of their scholarly or professional expertise, knowledge engagement and transfer, thereby bringing recognition to the University. 4.4.4 Other service to the community that flows from the discipline, or field, or that accrues through other distinguished service to the University and/or the community may be acknowledged when it brings distinction to the University and/or community.

[Current Handbook I.4.4.4]

3.4.6 With regard to all service activities as outlined above, serving as Chair/Co-Chair or Executive Membership, for example, could carry significantly more weight than that of membership.

Serving as Editor or Associate Editor, or as a member of an Editorial Board for a journal or similar body, for example, could also carry significantly more weight than that of reviewing. It is the role of the Head or equivalent to take into account the time commitment and role that an academic staff member takes on in various service assignments.

3.4.7 Academic staff members may also contribute service to specific communities requiring significant time commitment in order to establish trust, depth and stability, thereby integrating the University with its communities. In some instances, such contributions may be a necessary element of their research and scholarship activities which should be recognized in considerations for Tenure and Promotion as well as Merit Assessment.

3.4.8 Formal and informal service commitments across the University are often disproportionally expected from academic staff members of under-represented groups. Their commitment to offer a diversity of perspectives and experiences on committees and other decision-making bodies supports the University in making the best possible decisions and to establish an inclusive campus for all. Such contributions shall be considered in Tenure and Promotion as well as in Merit Assessment.

3.5 Administrative Duties

In accordance with Articles 28.3 and 29.2.3 of the *Collective Agreement*, the quality of administrative leadership shall be recognized when evaluating academic staff for Tenure and Promotion as well as for Merit Assessment. Administrative duties can take the form of formal appointments or may occur informally.

4 Requirements for Academic Staff Ranks and Streams

4.1 General Considerations

4.1.1 The following paragraphs set out the requirements for academic staff members across ranks and streams for professorial and instructor as well as administrative and professional streams. These requirements describe the level at which academic staff members in each rank and stream are expected to contribute to research and scholarship, teaching, and service.

4.1.2 As a principle, expectations increase in relation to rank. As academic staff members progress through the ranks, they may take on a variety of roles in a University community and in their professions, and the vitality of the University community, the academic disciplines, and the broader community or society depends upon their commitment and involvement.

4.2 ~~4.6~~ Requirements for Assistant Professor

4.2.1 ~~4.6.1~~ Appointment to the rank of Assistant Professor normally requires completion of the highest rank of academic training in a discipline, or field. Evidence or promise of original high-quality research and scholarship ~~evidence of successful teaching ability or professional experience, with evidence of appropriate research or professional activity beyond that involved in the completion of academic or professional training.~~ and future development as a scholar must be present. Where appropriate to the proposed program of research and scholarship, evidence or promise of the applicant's ability to obtain competitive funding may also be required. [See also 3.2.7]. Appointment to the rank of Assistant Professor may also require evidence or promise of teaching proficiency or professional activity. [Current Handbook I.4.6.1]

4.3 ~~4.7~~ Requirements for Associate Professor

4.3.1 ~~4.7.1~~ Appointment at, or promotion to the rank of Associate Professor normally requires evidence of high-quality research and scholarly activities, evidence of teaching effectiveness (as outlined in I.3.3.1,) ~~recognized research attainment or equivalent professional attainment,~~ and an appropriate ~~a satisfactory~~ record of service. [Current Handbook I.4.7.1]

4.3.2 Appointment at, or promotion to the rank of Associate Professor normally requires evidence of an established academic program of a calibre equivalent to national recognition by peers. According to discipline or field, indicators may vary; some examples are as follows:

  a) evaluation by external referees as recognized authorities external to the University, who are qualified to evaluate the applicant;
  b) publication of high-quality peer reviewed or equivalent juried creative work in highly ranked journals of the field and/or competitive peer-reviewed conference proceedings;
  c) creative or professional awards or prizes that bring distinction to the University;
  d) Keynote address or invited speaker to conferences, seminars, or workshops, at the local, regional, national or international level, relevant to the discipline or field;
  e) service as an expert to a well-recognized organization;
  f) election or appointment as a member or leader of a reputable scholarly society;
  g) service as peer reviewer for journals or granting bodies including *ad hoc* reviewing;
  h) participation in research networks, consortia, or research teams.

4.3.3 For appointment at, or promotion to the rank of Associate Professor, it is expected that a record of high-quality research and scholarship such as peer-reviewed or refereed presentations or publications in an academic, community or artistic forum suitable to the discipline, or field, has been achieved, or other measurable contributions to professional practice, knowledge engagement, innovation, or entrepreneurship. Evidence of ability to obtain competitive funding to sustain a research program is normally required. [See also I.3.2.7].

4.3.4 In some disciplines or fields, and depending upon assigned duties, appointment at or promotion to the rank of Associate Professor may require the academic staff member to have successfully taught a variety of courses and provided evidence of teaching effectiveness (e.g. as part of a Teaching Dossier). This may be demonstrated by contributing to course and/or curricular development, serving as a member of a graduate student supervisory committee, providing trainee mentorship, and/or demonstrating successful ~~When the teaching function is assessed, evidence of effective performance respecting graduate programs and the supervision of and involvement with graduate students shall also be considered, where appropriate.~~ supervision or co-supervision of undergraduate or graduate students or other trainees. Teaching effectiveness also includes a demonstrated ability to apply evidence-based teaching and learning approaches, and to design learning experiences grounded in a clearly articulated teaching philosophy. [Current Handbook I.4.7.2]

4.3.5 For appointment at, or promotion to the rank of Associate Professor, a satisfactory record of and active involvement in university, professional or community service which has shown commitment to the Department, Unit, Faculty, University or wider community is also expected, as defined in the relevant Faculty Guidelines.

4.3.6 When an academic staff member holds a tenure-track appointment at the rank of Assistant Professor, the granting of promotion to the rank of Associate Professor normally carries with it the granting of tenure.

4.4. ~~4.8~~ Requirements for Professor

4.4.1 Appointment at, or promotion to the rank of Professor is reserved for those ~~who in the opinion of colleagues,~~ whose academic achievements would normally be recognized by their peers within the University and beyond, to be of a calibre equivalent to international standing and as ~~are~~ outstanding in their community, discipline, or field. [Current Handbook I.4.8.1].

According to discipline or field, indicators may vary; some examples are as follows:

   a) evaluation by internationally recognized authorities external to the University, who are qualified to evaluate the applicant;
   b) publication of high-quality peer reviewed articles in the top-ranked journals of the field or equivalent juried creative works;
   c) internationally recognized or influential creative or professional awards or prizes that bring distinction to the University;
   d) Keynote address or invited speaker to high-calibre or international conferences, seminars, or workshops, at leading venues;
   d) participation in conferences, seminars, or workshops, at leading venues;
   e) invitation to contribute to edited collections;
   f) service as peer reviewer or Editorial Board member for journals or granting bodies including *ad hoc* reviewing;

g) participation in internationally known or influential research networks, consortia, or research teams;
h) service as an expert to an internationally recognized organization;
i) election or appointment as a member or leader of a world-class scholarly society.

4.4.2 Appointment at, or promotion to the rank of Professor is a recognition of the highest quality of contributions to research and scholarship, teaching, and service including leadership contributions, and/or impact or innovation within the relevant community, discipline, or field, resulting in distinguished recognition.

4.4.3 Whereas relative contributions in the areas of research and scholarship, teaching, and service may vary across the professorial stream, appointment at, or promotion to the rank of Professor normally requires a sustained body of research and scholarship that has impacted the community, discipline, or field in a significant way, evidence of an on-going research program sustained by peer-reviewed competitive external or industry grants, where applicable and defined by the relevant Faculty Guidelines, or other contributions to creative or professional practice, knowledge engagement, innovation, or entrepreneurship. ~~4.8.4 For academic staff members in the professorial stream, the relative contributions in the areas of teaching, research and service may vary but special emphasis shall be placed on teaching performance at both the undergraduate and graduate level~~. Notwithstanding ~~this emphasis on~~ the importance of teaching performance and effectiveness, ~~in no case shall~~ appointment at, or promotion to the rank of Professor ~~shall only~~ be recommended when the ~~individual~~ academic staff member is recognized ~~not a clearly established national or international reputation~~ to be of a calibre equivalent to international standing on the basis of research and scholarship, ~~research,~~ or equivalent creative activity, or professional contributions to the relevant community, ~~a~~ discipline, or field, as described in I.4.4.1. [Current Handbook I.4.8.4]

4.4.4 Depending upon assigned duties, ~~4.8.2 Aa~~ppointment at, or promotion to the rank of Professor normally requires evidence of teaching effectiveness~~.~~ (e.g. as part of a Teaching Dossier) at the undergraduate and graduate levels and/or educational leadership, and an established track record of supervising or co-supervising undergraduate or graduate students or other trainees, mentorship, and supervisory committee membership. Teaching effectiveness also includes a demonstrated ability to apply evidence-based teaching and learning approaches, and to design learning experiences grounded in a clearly articulated teaching philosophy.
[Current Handbook I.4.8.2]

4.4.5 Appointment at, or promotion to the rank of ~~4.8.5 A~~ Professor normally requires a distinguished ~~is also expected to have an established~~ record of service contributions to the iInstitution, ~~and~~ the appropriate discipline and ~~when relevant~~ profession, and/ or broader community. [Current Handbook I.4.8.5]

4.5 ~~4.9~~ Requirements for Instructor

4.5.1 Where appropriate to the discipline or field, ~~4.9.1 A~~appointment to this rank may require~~s~~ completion of the highest rank of academic training or relevant professional designation. ~~e~~Evidence or promise of ~~successful teaching ability, professional experience, and/or professional / educational qualifications appropriate to the intended duties of the position.~~ teaching effectiveness or competency in teaching and learning (e.g. as part of a Teaching Dossier), an awareness of how to apply scholarly approaches to teaching and learning practices, participation in professional learning activities related to teaching and learning, as well as commitment to, or experience with defining learning goals, supporting student learning activities, and creating assessment strategies may also be required. [Current Handbook I.4.9.1]

4.5.2 Appointment to ~~4.9.2 T~~the ~~duties of an~~ rank of Instructor ~~will normally include, but not go beyond,~~ requires engagement ~~with~~ in the research and scholarship required to maintain currency in pedagogy and curricular content ~~of~~ ~~in~~ the relevant discipline, or field.
[Current Handbook I.4.9.2]

4.6 ~~4.10~~ Requirements for Senior Instructor

4.6.1 ~~4.10.1~~ In addition to the ~~qualifications~~ requirements for an Instructor, appointment at, or promotion to the ~~this~~ rank of Senior Instructor requires evidence of teaching effectiveness (e.g. as part of a Teaching Dossier); ~~a creative approach to the teaching function; evidence that the individual is capable of initiating and participating in a wide variety of teaching activities; evidence that the individual is thoroughly familiar with the current status of the appropriate discipline or one or more specialized areas thereof; and a satisfactory record of service.~~ a demonstrated ability to apply scholarly approaches to teaching and learning, and/or to design student learning experiences and assessment strategies grounded in a clearly articulated teaching philosophy. ~~Appointment to this rank may also consider evidence of leadership roles, and evidence of pedagogical expertise or involvement with curriculum development. Educational and professional qualifications beyond those for Instructor may be required.~~ [Current Handbook I.4.10.1]

~~4.10.2 Senior Instructors are expected, upon assignment by the Dean or Department Head, to take major responsibilities for teaching and related professional activities of the Faculty or Department.~~ [Current Handbook I.4.10.2]

~~4.10.3 The duties of a Senior Instructor will normally include, but not go beyond, the scholarship required to maintain currency in pedagogy and content in the discipline.~~ [Current Handbook I.4.10.3]

4.6.2 Appointment at, or promotion to the rank of Senior Instructor requires the continuous development of a scholarly foundation for designing and implementing innovative teaching and that supports student learning, an ability to create respectful and inclusive learning environments

that promote student engagement, participation in professional learning, and engagement in reflective practice to strengthen one's teaching, learning and assessment practices.

4.6.3 Appointment at, or promotion to this rank may also require a satisfactory record of and active involvement in educational activities such as engagement in professional, University or community service which has shown commitment to advancing teaching and student learning within the Department, Faculty, Unit, University or broader community

4.6.4 When an academic staff member holds a tenure-track appointment at the rank of Instructor, the granting of promotion to Senior Instructor normally carries with it the granting of tenure.

4.7 ~~4.11~~ Requirements for Teaching Professor

4.7.1 In addition to the requirements for Senior Instructor, the rank of Teaching Professor normally requires a demonstration of the highest quality of contributions to a research-informed practice of and reflective inquiry into teaching and learning. This rank ~~4.11.1 The rank of Teaching Professor~~ is reserved for those who ~~, in the opinion of colleagues~~ are outstanding in their discipline, or field, for their leadership contributions to teaching and learning. ~~and have exceeded the criteria of Senior Instructor in his/her faculty.~~ [Current Handbook I.4.11.1].

Promotion to Teaching Professor requires documented evidence of distinguished achievement in three of the four categories below:

a) professional learning and development: engaging in professional development to improve teaching and student learning;
b) research and scholarship: consulting relevant scholarly sources to design and implement teaching and learning experiences, conducting and sharing research and scholarship on teaching and learning to advance knowledge in the teaching and learning community;
c) mentorship: supporting the teaching and academic development of faculty and students;
d) educational leadership: activities that advance teaching and learning communities by sharing expertise that helps others to strengthen their teaching practice.

4.7.2 Notwithstanding demonstrated distinction in teaching effectiveness, appointment at, or promotion to the rank of Teaching Professor shall normally only be recommended where the academic staff member has clearly established an outstanding reputation, demonstrated through educational leadership contributions to the theory and practice of teaching and learning, impact on, or innovation within the relevant community, discipline, or field, resulting in distinguished peer-recognition.

According to discipline or field, indicators may vary; some examples are as follows:

a) advanced innovations in teaching and learning with impact beyond the classroom;
b) participation in and/or leadership of professional learning activities (e.g. learning communities, workshops, seminars, peer evaluations) to share teaching and learning expertise with others;

c) dissemination of research and scholarship in the broader community (e.g. Department/Faculty/University presentations and workshops, conference presentations and proceedings, keynote addresses or invited speaker, white papers, journal articles);
d) educational leadership responsibilities within Department, Faculty, Unit, University or broader community;
e) recognition of teaching expertise across and/or beyond the University.

4.7.3 Appointment at, or promotion to the rank of 4.11.1A Teaching Professor ~~is also expected to have a~~ also requires a distinguished record of service contributions to the institution, ~~and~~ the appropriate discipline, and ~~when relevant~~ profession, and/ or broader community.

[Current Handbook I.4.11.1]

4.7.4 ~~4.12~~ Requirements for Lecturer (Medicine)

~~4.12.1~~ Appointment as Lecturer (Medicine) shall require the completion of academic or professional qualification in Medicine or its associated disciplines. Appointment shall also require evidence of appropriate teaching or professional experience. [Current Handbook I.4.12.1]

Note, this is an obsolete category but still present within the Collective Agreement; it may be removed from the Collective Agreement in the near future at which time 4.7.4 can be removed from the Handbook]

4.8 ~~4.13 General~~ Requirements for Academic Staff in (Administrative and Professional) Streams

4.8.1 ~~4.13.1~~ Librarians

~~4.13.1.1 The c~~Criteria with respect to Librarians, Archivists, and Curators, shall be established by the Vice Provost (Libraries and Cultural Resources) in consultation with and ~~with the~~ approval of a majority of the Academic Council of Libraries and Cultural Resources. ~~Academic Councils.~~

[Current Handbook I.4.13.1.1]

4.8.2 ~~4.13.2~~ Counsellors

~~4.13.2.1 The c~~Criteria with respect to ~~respecting~~ counsellors in Student and Enrolment Services shall be established by the Chief Academic Office for Student Affairs in consultation with and ~~with the~~ approval of a majority of ~~the persons~~ counsellors holding academic appointments. In addition, these criteria shall articulate a commitment to practices in equity, diversity and inclusion. [Current Handbook I.4.13.2.1]

4.8.3 ~~4.13.3~~ Other (Administrative and Professional Academic Staff)

4.8.3.1 ~~4.13.3.1 The duties and c~~Criteria with respect~~ing~~ to other ~~Academic Staff (A~~administrative and ~~P~~professional) academic staff members ~~in all other areas at the time of approval of these Procedures~~ shall be established by the appropriate Vice-President or delegate with due regard to the historic duties of the position and after meaningful consultation with the academic staff member(s). ~~current appointee.~~ [Current Handbook I.4.13.3.1]

4.8.3.2. 4.13.3.2 A review of these approved duties and criteria established through Section 4.13.3.1 for an administrative and professional academic staff member position (Administrative and Professional) may be initiated by either party prior to the commencement of a calendar year. The review and any modification of the criteria and duties shall be carried out by the process outlined in Section 4.13.3.1 I.4.8.3.1. [Current Handbook I.4.13.3.2]

5 Criteria for Renewal, and Tenure and Promotion

5.1 General Considerations

5.1.1 5.1 The rRenewal of a tenure-track appointment requires a determination that, given the applicant quality and pattern of career performance of the academic staff member, there is a reasonable likelihood that they applicant will be able to apply successfully apply for an appointment *With Tenure* at the University of Calgary within the time allowed.

[Current Handbook I.5.1]

5.1.2 Achieving tenure and promotion is a milestone in an academic career and an expression of a university's commitment to the academic staff member who is making the application. Criteria applied in Tenure and Promotion processes have, however, been shown to be subject to implicit bias – the attitudes or stereotypes that can affect our understanding, actions, or decisions, in an unconscious manner. It is, therefore, important for FTPC members to recognize that bias may be present and to critically reflect on such when reviewing applications and when referencing relevant criteria.

5.1.3 Advancement to a higher rank is not, however, automatic. Continued growth in research and scholarship, teaching, and service is typically required for all ranks and streams according to assigned duties. Outstanding performance in one area normally cannot substitute for insufficient performance in another.

5.2 Tenure and Promotion in the Professorial Stream

5.2.1 5.2 The gGranting of an appointment *With Tenure* in the professorial ranks requires a determination that, given the applicant quality and pattern of career performance of the academic staff member, there is a substantial likelihood that they applicant will be able to sustain a career as a productive researcher and scholar, effective teacher, and active contributor to the University of Calgary community. To this end: [Current Handbook I.5.2]

5.2.2 5.2 When an academic staff member applies for an appointment *With Tenure* in the Professorial Stream, the Faculty Tenure and Promotion Committee (FTPC) shall seek evidence

that they have been successful in meeting criteria for the rank, as set out in I.4 of this Handbook. To this end, the FTPC shall:

a) ~~the Committee shall~~ review evidence of the ~~applicant's~~ accomplishments ~~in~~ of the academic staff member in research and scholarship, teaching, ~~research,~~ and service, or other assigned duties, both over their entire career and since appointment at the University of Calgary;

b) ~~the Committee shall~~ then consider their ~~applicant~~ overall career pattern, taking into account ~~of~~ the time elapsed since completion of the highest degree, or professional designation, accomplishments in positions prior to employment at the University of Calgary, and other relevant factors;

c) ~~in assessing the evidence presented to it, the Committee shall use the specification of these criteria~~ use criteria as set out in the relevant Faculty Guidelines in evaluating the evidence presented;

d) ~~in assessing research, the Committee shall, in addition to considering the merit of the applicant's various research projects, make a determination whether the applicant has demonstrated the ability to bring research projects to timely conclusions.~~
[Current Handbook I.5.2]

5.3 Tenure and Promotion in the Instructor Stream

5.3.1 ~~5.3 When the recommendation sought is for appointment~~ When an academic staff member applies for an appointment *With Tenure* in the ~~i~~Instructor Stream ~~ranks~~, the FTPC ~~Committee~~ shall seek evidence that the academic staff member ~~applicant~~ has been successful in meeting ~~the~~ criteria for the ~~applicant's~~ rank as set out above in I.4 of this Handbook. ~~The Committee shall also satisfy itself, based upon the quality and pattern of career performance, that there is a reasonable likelihood that the applicant will be able to sustain a satisfactory pattern of career development as an Instructor.~~ [Current Handbook I.5.3]

5.3.2 The granting of an appointment *With Tenure and Promotion to Senior Instructor* requires a determination that, given the quality and pattern of career performance of the academic staff member, there is a substantial likelihood that they will be able to sustain a productive career as an effective teacher and active contributor to the University of Calgary community.

To this end, the FTPC shall:

a) review evidence of the accomplishments of the academic staff member in teaching and learning, and service, or other assigned duties, both over their entire career and since appointment to the University of Calgary;

b) consider their overall career pattern, taking into account the time elapsed since completion of the highest degree or professional designation, accomplishments in positions prior to employment at the University of Calgary, and other relevant factors;

c) use criteria set out in the Faculty's Guidelines in evaluating the evidence presented;

5.4 Promotion to Professor or Teaching Professor

5.4.1 Advancement to the highest rank in professorial and instructor streams is not automatic. Excelling in one area of criteria for ranks and streams normally cannot substitute for another. Rigorous standards are applied for evaluating research and scholarship, teaching, and service, or other assigned duties, in considering promotion to Professor or Teaching Professor to ensure that the academic staff member has achieved the recognition required for this rank as set out above in this Handbook (see I.4). An academic staff member considering promotion to Professor or Teaching Professor should be an exemplary member of the academy who consistently demonstrates a high standard of achievement in all areas and roles and demonstrates due diligence in meeting assigned duties.

5.4.2 When an academic staff member applies for Professor or Teaching Professor, ~~6.1 For promotion or tenure, Faculty Tenure and Promotion Committees~~ the FTPC shall consider the complete career record of the academic staff member ~~appointee~~ at the University of Calgary and elsewhere. [Current Handbook I.6.1]

5.5 Transfer between Streams

5.5.1. In accordance with Articles 28.7.6 and 28.10 of the *Collective Agreement*, all provisions regarding promotion shall apply to the process of transfer between streams, with the question being whether the academic staff member seeking the transfer meets criteria for the new rank. A tenured academic staff member may not apply for a rank that normally does not include tenure (e.g. Assistant Professor or Instructor).

5.5.2 In the event that an academic staff member wishes to apply to transfer from one stream to another (i.e. professorial stream to instructor stream or instructor stream to professorial stream), the same criteria as outlined above in this Handbook must be met. In the event that an academic staff member meets these criteria, the FTPC members shall evaluate them based upon the rank and stream to which they are transferring, ensuring that all criteria as set out above, as well as Faculty Guidelines, have been met.

5.6 Additional Considerations for Renewal, Tenure and Promotion

5.6.1 ~~4.5.6~~ Outside Professional Activity shall be considered in determining career advancement to the extent that any such ~~this~~ activity ~~demonstrably~~ contributes to ~~the~~ fulfilling ~~ment of~~ the ~~academic appointee's~~ obligations of the academic staff member to the University and to ~~the~~ enhancing ~~ement~~ the stature of the University. [Current Handbook I.4.5.6]

5.6.2 ~~4.5.7~~ Notwithstanding the payment of administrative honoraria, the administrative role and the quality of academic administration and leadership provided shall be taken into account when considering the overall performance. of the academic staff member where relevant to Tenure and Promotion. [Current Handbook I.4.5.7]

Student submissions are admissible if they are written expressions, prepared by individual students and signed, that give justification for their views. [Current Handbook I.4.5.8]

No anonymous material shall be introduced or considered with the exception of student feedback results of class surveys conducted under the auspices of the Department Faculty or General Faculties Council [Current Handbook I.4.5.9]

5.6.3 With regard to Tenure and Promotion, materials in support of demonstrating teaching effectiveness shall be included in the Teaching Dossier of the academic staff member as laid out in Appendix 28A of the *Collective Agreement*.

5.7 Renewal, Tenure and Promotion in Administrative and Professional Streams

In Administrative or Professional streams, 5.4 The granting of an appointment *With Tenure* in the (Administrative and Professional) ranks requires a determination that, given the applicant's quality and pattern of career performance of the academic staff member, there is a substantial likelihood that they applicant will be able to sustain a career as a productive and effective member of professional, and active contributor to, the University of Calgary community. To this end, the FTPC shall:

a) the Committee review evidence of their applicant's accomplishments since appointment at to the University of Calgary;
b) the Committee shall then consider their applicant's overall career pattern taking into account of the time elapsed since completion of their highest degree of professional designation, accomplishments in positions prior to employment at the University of Calgary, and other relevant factors; and
c) in assessing the evidence presented to it, the Committee shall use the specification of these criteria provided in the relevant Unit's Guidelines or the specific criteria referred to in 4.13.3 above, within this Handbook. [Current Handbook I.5.4]

6 Criteria for Merit Assessment

6.1 General Considerations

6.1.1 In assessing performance and assigning merit, the Head or equivalent shall base their assessments on the requirements set out in I.3 and I.4 of this Handbook as well as Faculty Guidelines.

6.1.2 3.1 Article 29.2.2 of the *Collective Agreement* states that the criteria for the assessingment of individual academic staff members shall be applied in a manner consistent with range and proportion of assigned duties assigned as outlined under Article 12 of the Collective Agreement. [Current Handbook I.3.1]

6.1.3 ~~3.1~~ Article 29.2.2 of the *Collective Agreement* further states that merit shall be assessed on the full duties performed by the academic staff member. [Current Handbook I.3.1]

6.1.4 ~~3.2~~ Article 29.2.3 of the *Collective Agreement* states that notwithstanding the payment of administrative honoraria, the administrative role and the quality of academic administration and leadership provided shall be taken into account when considering the overall performance of academic administrators and others who ~~perform administrative tasks~~ serve in formally appointed administrative leadership positions. Academic staff members who serve their academic units, faculty or the university in administrative roles such as Department Heads, Associate Deans, Program or Institute Directors or other equivalent roles shall also be assessed on the quality of their leadership, e.g. how they have advanced the academic mission of their portfolio, displayed vision, implemented plans and strategies, advanced a culture of high quality research and scholarship, teaching and service, and created meaningful and relevant academic programs. [Current Handbook I.3.2]

6.1.5 ~~3.4~~ Article 29.2.5 of the *Collective Agreement* states that ~~the~~ criteria for ~~the~~ assessing ~~ment of individual~~ academic staff members in positions outside the professorial, instructor, librarian, curator, archivist and counsellor streams shall be based on the duties assigned at the time of hiring, and as mutually amended by the academic staff member and supervisor over time, or as agreed to by the Provost and Faculty Association. [Current Handbook I.3.4]

6.1.6 ~~3.5~~ Article 29.2.6 of the *Collective Agreement* states that as an ~~individual~~ academic staff member progresses through a rank, the normal expectation of performance rises.
[Current Handbook I.3.5]

6.1.7 Article 29.3.9.2 of the *Collective Agreement* also states that the awarding of increments of any amount may not be indicative of success in applications for Renewal, Tenure and Promotion. ~~difficulties in future career advancement.~~

6.1.8 Heads or equivalents are uniquely qualified to assess the impact of the academic staff member's contributions in the particular community, discipline, or field and are ~~3.6 Heads and equivalent administrative officers~~ charged with the responsibility of preparing written performance assessments ~~should appreciate that this document is~~ critical ~~information for committees~~ for Faculty Merit Committees (FMC). Written assessments should include comments on the quantitative and qualitative contributions an academic staff member has made during the reporting period. ~~Quantative data~~ Evaluative comments should be included, in a concise format, wherever possible and appropriate~~,~~. ~~Generalized statements with little or no information content are unacceptable, and such assessments should be rejected.~~ and summarize contributions ~~3.7 The contributions of the individual~~ in research~~,~~ and scholarship, creative and/or professional activities, teaching, and service~~. must be summarized and evaluated~~ according to assigned duties.

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~~The Department Head or equivalent is uniquely qualified to assess the impact of the staff member's contributions in the particular field.~~ [Current Handbook I.3.6 & 3.7]

6.1.9 In assessing performance and assigning merit, the Head or equivalent shall consider the possible inequities in workload and assigned duties affecting members of under-represented groups as outlined in I.3.4.8.

6.1.10 ~~4.4.6~~ Outside Professional Activity for remuneration shall not normally be counted as service for the purposes of Merit ~~a~~Assessment. [Current Handbook I.4.4.6].

6.2 Criteria for Assessing Research and Scholarship.

6.2.1 Research and scholarship are major functions in a research-intensive university. Through research and scholarship, academic staff members contribute to innovation and advancements in their discipline, field, and communities and to the solving of challenges that societies face, both locally and globally. The assessment of research and scholarship shall be based upon expectations outlined in I.3 and across different ranks and streams in I.4, along with the relevant Faculty Guidelines.

~~4.3.6 The development of software and the creation of data bases or the creation or entry of information into data bases or contributions to program libraries shall normally be considered equivalent to research publication only if the results have been subjected to informed peer review or appropriate refereeing.~~ [Current Handbook I.4.3.6]

6.2.2 ~~4.3.7~~ All research~~,~~ and scholarship, and other creative activities shall be assessed on the merits of the work, regardless of the form in which they appear ~~Electronic publications—whether books, articles, journals, or databases—shall be considered equivalent to more traditional forms of publication if they~~ and are subjected to the same rigor of informed peer review or appropriate refereeing. ~~4.3.8~~ It may be ~~particularly~~ important for Heads and/or Deans to engage in post-publication review to assess value and impact, where traditional peer review is not appropriate or applicable. [Current Handbook I.4.3.7 & 4.3.8]

6.2.3 Faculties will articulate how and when the Faculty credits scholarly work in various stages of publication (see I.2.4.g).

~~4.3.9 With respect to scholarly, creative and professional activities, it is particularly important to delineate peer-reviewed publications, juried exhibitions, invitational lectures and performances, nationally and/or internationally recognized innovations in professional practice. Deans are also required to file with the Chair of the General Merit Committee (GMC) a statement on how publications are acknowledged in their Faculty, e.g. when they are "in print" and published, or when they are "in press" or "accepted for publication."~~ [Current Handbook I.4.3.9]

6.2.4 In assessing research and scholarship activities, the Head or equivalent as well as the FMC, should be attentive to the evolving and changing nature of research and scholarship, and the ways in which knowledge is produced and disseminated, as specified in the relevant Faculty Guidelines.

6.3 Criteria for Assessing Teaching

6.3.1 Teaching is a major function of the work academic staff members perform at the University. The development, renewal and delivery of undergraduate and graduate level courses, the evaluation, supervision or co-supervision, and mentorship of trainees, are part of the teaching responsibilities of all academic staff members. The assessment of teaching is a critical step for constructively and continuously improving the quality of teaching and the student experience across the University.

In this Handbook, expectations regarding teaching effectiveness are outlined in I.3, and across different ranks and streams in I.4.

6.3.2 ~~4.2.2~~ Teaching performance and effectiveness shall be evaluated ~~on a regular basis.~~ as part of the performance review for merit assessment purposes. Such evaluation should consider all ways academic staff members ~~a teacher~~ address~~es~~ their teaching responsibilit~~y~~ies and interactions with undergraduate or graduate students or other trainees. ~~and students.~~ ~~In addition to interactions in the contexts noted in Section 4.2.1,~~ The evaluation of teaching should also consider the extent of innovation, preparation, reflection and integration of current knowledge, level of interest, direction, and encouragement demonstrated by the academic staff member ~~appointee.~~ Participation in teaching development programs, and/or seeking expert ~~help~~ opinion to assist in ~~the improvement of teaching,~~ improving teaching and learning shall ~~will~~ be viewed as an indication of commitment to teaching. In some disciplines, consideration should also be given when academic staff members seek the advice of Indigenous knowledge keepers. [Current Handbook I.4.2.2]

6.3.3 Evaluation of teaching shall be multi-faceted and, in particular, shall not be based primarily on any one method of evaluation. No single tool or activity is sufficient to measure teaching performance and effectiveness. Multiple sources of evidence shall be used to obtain a holistic picture of the performance of the academic staff member. This may include self-reflection, student feedback, peer observation, course design materials, and educational leadership activities provided by the academic staff member as well as any other assessments available to the Head or equivalent.

6.3.4 ~~4.2.9~~ Evaluations of teaching should state the basis for the assessment, e.g. student feedback, ~~assessments,~~ ~~multi-year teaching dossier,~~ peer review ~~by senior colleagues,~~ classroom ~~/~~ or laboratory visits by the ~~Department~~ Head or equivalent, etc. It would be helpful to ~~promotions committees~~ FMCs ~~to give~~ to provide an indication of the time commitment to teaching, and the nature and significance of the involvement. [Current Handbook I.4.2.9]

6.3.5 In assessing teaching, the Head or and equivalent as well as the FMC shall refer to criteria for teaching as set out in I.3.3 of this Handbook and criteria established for teaching for academic staff members in different ranks and streams, as set out in I.4 of this Handbook.

6.3.6 Where applicable, in assessing teaching, the supervision or co-supervision of undergraduate or graduate students or other trainees, and mentorship, as well as participation on supervisory committees, and/or serving as an external examiner, shall be considered.

~~Although the evaluation of teaching may not be based solely on feedback by students, such evaluations are one factor that indicate how student experience the classes they take are thus required for all academic appointees who have teaching responsibilities (Teaching and Research) on a regular basis. Student evaluations must be used consistently. The Student evaluations feedback must be interpreted reasonably in light of other relevant contextual factors, including factors which may be outside of the control of the academic appointee.~~ [Current Handbook I.4.2.3]

~~In the case of the Universal Student Rating Instrument, all information provided by the student should be taken into account when interpreting the results.~~

~~Where the USRI information becomes available after the deadline for submission of the Academic Performance Report, the academic staff member shall have the discretion as to whether the information is used for the performance years under consideration, or have that information carried forward for use in the next assessment cycle, consistent with such other limits on reporting as established under the USRI rules.~~ [Current Handbook I.4.2.4]

~~Part of such evaluation of teaching may be based upon the general reputation enjoyed by the teacher among informed peers and students. Such reputation shall be evidenced only by signed documentation or formal evaluation processes consistently applied.~~ [Current Handbook I.4.2.5]

~~The development, testing, and application of computer-assisted learning techniques and software shall be deemed to be innovative teaching when the techniques or software have been successfully integrated into the teaching of University course offerings and the usefulness of the activity has been acknowledged by informed peers in a manner similar to the peer review of materials submitted for publication.~~ [Current Handbook I.4.2.7]

~~It is the responsibility of the administrative officer writing an assessment to ensure that the academic appointee's performance in the teaching and supervision of graduate students also be included, following such appropriate consultations with the Faculty of Graduate Studies as may be necessary.~~ [Current Handbook I.4.2.8]

~~When the teaching function is assessed, evidence of effective performance respecting graduate programs and the supervision of and involvement with graduate students shall be considered, where appropriate.~~ [Current Handbook I.4.7.2]

6.4 Criteria for Assessing Service

6.4.1 Service is an important function of the work academic staff perform at the University. Service activities move the institution forward through collegial governance, advance academic disciplines, and impact communities and society. Academic staff members also perform important administrative tasks that may not be subject to a formal appointment; this work should be recognized and assessed as a contribution to service.

6.4.2 In evaluating service contributions, the Head or equivalent should assess the information provided by the academic staff member on the nature and type of service activities, the time commitment, significance and impact of these service activities, and include into the written assessment.

6.4.3 In assessing service, the Head or equivalent as well as the FMC shall refer to criteria for service as set out in I.3.4, and criteria established for service contributions for academic staff members in different ranks and streams, as set out in I.4, as well as relevant Faculty Guidelines.

~~4.4.2 Service may also be measured by substantial contributions to the general or professional community, the Province, and the Nation through the application of scholarly or professional knowledge and expertise.~~ [Current Handbook I.4.4.2]

~~4.4.7 In the evaluation of service contributions, Department Heads should provide information on the time commitment of academic appointees to activities such as service on editorial boards of prestigious journals, on grant selection committees and adjudication panels of national agencies, and similar professional involvement, as well as provide and assessment of their significance importance of these activities.~~ [Current Handbook I.4.4.7]

GENERAL FACULTIES COUNCIL
ACTION BRIEFING NOTE

○ For Approval   ○ For Recommendation   ◉ For Discussion

SUBJECT: **Revisions to the Sexual Violence Policy**

PROPONENT(S)

Deborah Book, Legal Counsel

REQUESTED ACTION

The drafting team is requesting feedback from the General Faculties Council on the proposed revisions to the Sexual Violence Policy.

KEY CONSIDERATIONS/POINTS

Following conversations with undergraduate student leaders and the new Vice-Provost, Equity, Diversity and Inclusion to address concerns raised at the Board of Governors meeting in June 2020, we are proposing revisions to improve and clarify the policy. The proposed revisions explicitly recognise gender-based violence and clearly reference the differential impacts and role of intersectionality in sexual and gender-based violence.

The proposed revisions will help ensure the University continues to improve the way in which the University supports the health and well-being of University community members affected by sexual and gender-based violence. Explicitly recognising gender-based violence and the role of intersectionality in sexual and gender-based violence will help UCalgary become more inclusive.

RISKS

The revisions to the policy should have a positive impact on student experience, by demonstrating that we continue to listen to and reflect upon the comments raised by student leaders.

Conversely, failure to revise the policy may result in student leaders feeling their comments are not taken into account. In addition, failure to revise the policy may negatively impact UCalgary's efforts to become more inclusive and improve the way in which it supports the health and well-being of University community members affected by sexual and gender-based violence.

BACKGROUND

Revisions to the Sexual Violence Policy were approved at the June 2020 Board of Governors meeting. Student leaders who were members of the Board raised several concerns at the meeting and the drafting team was encouraged to consider the policy a living document and return with revisions promptly. After further discussions and reflection the drafting team is now proposing revisions to address the specific concerns raised.

ROUTING AND PERSONS CONSULTED

Progress	Body	Date	Approval	Recommendation	Discussion	Information
X	General Faculties Council	10/8/2020			X	
	Academic Planning and Priorities Committee	10/19/2020			X	
	GFC Executive Committee	10/21/2020		X		
	General Faculties Council	11/5/2020		X		
	Human Resources and Governance Committee	11/30/2020		X		
	Board of Governors	12/11/2020	X			

Other groups that have been, or will be consulted include:

- Alberta Union of Provincial Employees
- Provost's Team Meeting
- Student Enrolment Services Council
- Extended Deans' Council
- Academic Staff Harassment Advisory Committee
- Management and Professional Staff Executive Committee
- Sexual Violence Policy Implementation Committee
- Students' Union
- Graduate Students' Association
- Postdoctoral Fellows Association
- Mental Health Lens
- Indigenous Lens
- Executive Leadership Team Ops

NEXT STEPS

The drafting team will consider feedback from this discussion and revise the policy as appropriate.

SUPPORTING MATERIALS

Revised Sexual and Gender-Based Violence Policy, and blackline to current policy and clean copy.

Sexual and Gender-Based Violence Policy

Classification	Table of Contents	
Health, Safety & Environment	Purpose	1
	Scope	2
Approval Authority	Definitions	3
Board of Governors	Policy Statement	4
	Responsibilities	5
Implementation Authority	Procedures	6
President	Related Policies	7
	Related Information	8
Effective Date	History	9
June 1, 2017		
Latest Revision		
June 19, 2020		

Purpose

1   The purpose of this policy is to:

a)   affirm the University's commitment to addressing Sexual and Gender-Based Violence through. The University is striving to create an equitable, inclusive environment shaped by a culture of respect;

a)b) commit to providing supports to individuals affected by Sexual and Gender-Based Violence, fostering and promoting a culture of consent, and appropriate handling of Disclosures and Formal Reports related to Sexual and Gender-Based Violence; and

c)   outline the processes by which the University will respond to Disclosures and Formal Reports;

b)d)   recognize that Sexual and Gender-Based Violence will not be experienced by everyone in the same way, and each case will need to be assessed for differential impacts. Acts of Sexual Violence.and Gender-Based violence are rooted in systematic oppression, including colonialism, racism, sexism, homophobia, transphobia, or ableism;

e)   acknowledge that in a diverse university community like the University of Calgary, any response will need to reflect an intersectional lens, and assess if Sexual and Gender-Based Violence are compounded by other potential vulnerabilities, including sexual orientation, gender identity, gender expression, indigeneity, race/ethnicity, or religion.

Scope

2   This policy applies to all members of the University Community.

This policy operates alongside other applicable University policies and procedures. Where there is a conflict or inconsistency between the provisions of this policy and

another University policy or procedure, this policy governs to the extent necessary to resolve the conflict or inconsistency. However, this policy does not replace or supersede the provisions of any Collective Agreement. Consequently, if there is a conflict between the provisions of this policy and a Collective Agreement, the Collective Agreement governs to the extent necessary to resolve the conflict.

This policy applies to actions, interactions and behaviours of members of the University Community that take place:

a)   in or on University Facilities; or

b)   off University Facilities where a member of the University Community is involved in the business of the University or activities related to the University, or is representing the University; or

c)   off University Facilities, including through social media or other online means, where such actions, interactions or behaviour have a negative impact on a member of the University Community such that it materially interferes with their University learning, working or living environment.

Definitions   **3**   In this policy

a)   "Academic Staff Member" means an individual who is engaged to work for the University and is identified as an academic staff member under Article 1 of the applicable Collective Agreement.

b)   "Appointee" means an individual who is engaged to work for the University, or whose work is affiliated with the University, through a letter of appointment, including adjunct faculty, clinical appointments, and visiting researchers and scholars.

c)   "Appropriate Office" means the office, identified in the table below that is the responsible ~~or~~for the procedure that would be followed if a Formal Report were investigated.

Member of the University Community (Respondent)	Office	Procedure
Student	Student Conduct	Student Non-Academic Misconduct Procedure
Employee	AVP Human Resources	Workplace Investigation Procedure
Academic Staff Member, Appointee, Contractor, Postdoctoral Scholar, Senior Leadership Team Member excepting Executive Leadership Team Members	Protected Disclosure and Research Integrity	Procedure for Protected Disclosures
Executive Leadership Team Member (excepting the	President and Vice-Chancellor	Procedure for Protected Disclosures

President and Vice-Chancellor)		
President and Vice-Chancellor	Chair of the Board of Governors	Procedure for Protected Disclosures

d) "Collective Agreement" means any collective agreement between the Governors of the University of Calgary and (i) the Faculty Association of the University of Calgary, (ii) the Alberta Union of Public Employees, (iii) the Graduate Students' Association, (iv) the Postdoctoral Association of the University of Calgary, or (v) any other association or union representing Employees, in each case, in effect at the relevant time.

e) "Complainant" means the individual who has made a Formal Report under this policy.

f) "Consent" means the ongoing voluntary agreement of an individual to engage in the sexual activity in question.

g) "Contractor" means an individual or a sole proprietorship, or an individual acting on behalf of any other legal entity, who agrees to furnish materials to, or perform services for, the University for consideration.

h) "Disclosure" means when an individual shares information about a personal experience of Sexual and Gender-Based Violence with an Academic Staff Member, Appointee, Employee, Postdoctoral Scholar or Student.

i) "Employee" means an individual, other than an Academic Staff Member, Appointee or Postdoctoral Scholar, who is engaged to work for the University under an employment contract.

j) "Executive Leadership Team" means the executive leadership team at the University, which is comprised of the President, Vice-Presidents, and General Counsel.

k) "Field Stations" means any of the following University Facilities:
   i. Rothney Astrophysical Observatory;
   ii. Barrier Lake Research Station;
   iii. R.B. Miller Research Station; and
   iv. Kluane Lake Research Station.

l) "Formal Report" means a complaint to the University by an individual who is seeking recourse for an allegeda violation of this policy.

m) "Gender-Based Violence" means any violence, physical or psychological, targeting an individual because of their gender, gender identity, or gender expression.

l)n) "Interim Measures" means restrictions or adjustments implemented in an effort to maintain a positive, productive, and respectful learning, working, and living environment on University Facilities, pending the resolution of a Formal Report, police investigation, or other process. Interim Measures may also be implemented to support a Victim-Survivor who is considering whether or not to proceed with a formal process or who has decided not to proceed with a formal process.

m)o) "Postdoctoral Scholar" means an individual who has completed a doctoral degree and is carrying out research at the University under the direction or mentorship of a supervising Academic Staff Member.

n)p) "Reprisal" means a Retaliatory Measure taken against an individual because they have sought advice about making a Disclosure or Formal Report, made a Disclosure or Formal Report in good faith, co-operated in an investigation of a Formal Report, or declined to participate in behavior that would breach this policy.

o)q) "Respondent" means the member of the University Community allegedidentified in a Formal Report to have violated this policy.

p)r) "Retaliatory Measure" means any act intending to adversely affect an individual.

q)s) "Senior Leadership Team" refers to the individuals who, at the relevant time, are designated as members of the University's Senior Leadership Team.

r)t) "Sexual Assault" means any type of unwanted sexual act done by one individual to another that violates the sexual integrity of the individual as more fully described in 4.10.

s)u) "Sexual Harassment" means unwanted remarks, behaviours or communications of a sexual nature and/or unwanted remarks, behaviours or communications based on sex, gender identity, gender expression, or sexual orientation, where the individual responsible for the remarks, behaviours or communications knows or ought reasonably to know that these are unwanted.

t)v) "Sexual and Gender-Based Violence" means any violence, physical or psychological, through a sexual means that is committed, threatened or attempted against an individual without the individual's consent and by targeting sex, gender identity, gender expression, or sexual orientation. This includes, but is not limited to, Gender-Based Violence, Sexual Assault, Sexual Harassment, stealthing, indecent exposure, voyeurism, degrading sexual imagery, and the acquisition or distribution of a sexual image or video of a University Community member without their consent., and stalking when it targets an individual based on their sex, gender identity, gender expression or sexual orientation. It can include a single incident or a pattern of behaviour whether in person, online, or via other means.

u)w)   "Sexual Violence Response Office (SVRO)" means the University office which provides support to any University Community member who may have experienced Sexual and Gender-Based Violence and provides expert advice to members of the University Community who receive Disclosures and Formal Reports.

v)x) "Student" means an individual registered in a University course or program of study at the time of the alleged incident of Sexual and Gender Based Violence is said to have occurred.

w)y)   "Student at Risk Team" means a multi-disciplinary resource team comprised of University staff members representing Student Wellness, Campus Security (as required), Student Services, Residence Services and ad hoc committee members that coordinates intervention and support in response to At-Risk Behaviour (as defined in the Student-at-Risk Policy).

x)z) "Student Legal Assistance (SLA)" means the on-campus law clinic staffed by Students.

y)aa)   "Student Ombuds" means the Employee who has the title Student Ombuds and provides a safe place for Students to confidentially discuss Student related issues, academic and non-academic concerns, and other matters.

z)bb)   "Threat Assessment Committee" means a multi-disciplinary resource team comprised of University staff members representing Campus Security, Human Resources, Student Services, Student Wellness and Staff Wellness, and ad hoc committee members, that responds to reports of actual or potential workplace violence as provided for in the Workplace Violence Policy

aa)cc)   "University" means University of Calgary.

bb)dd)   "University Community" means all Academic Staff Members, Appointees, Employees, Postdoctoral Scholars, Students, Contractors and Volunteers.

cc)ee)   "University Facilities" means all buildings and grounds, including athletic and recreational fields, and Field Stations, owned, leased or operated by the University, except for property managed by West Campus Development TrustUniversity of Calgary Properties Group Ltd.

dd)ff)   "Victim - Survivor" means, an individual who has experienced Sexual and Gender-Based Violence. Not all people who have experienced Sexual and Gender-Based Violence identify with either term. Individuals can choose whether to be referred to as the victim, the survivor, the Victim-Survivor, or by name in any Disclosure. Individuals asking the University to investigate a Formal Report will be referred to as Complainants.

ee)gg)   "Volunteer" means an individual who, on a voluntary basis, provides a service or materials to the University.

4   **General**

4.1   All members of the University Community have the right to learn, work, and live in an environment where they are free from harassment, discrimination and violence. The University:

   a)   will promote a culture of respect so that those who make a Disclosure or Formal Report are treated respectfully;
   b)   has investigation processes that protect the rights of all individuals;
   c)   will provide training to Academic Staff Members, Appointees, Employees, Postdoctoral Scholars and Students on how to respond to a Disclosure of Sexual and Gender-Based Violence; and
   d)   will implement awareness, education and risk management programs to address the prevention of Sexual and Gender-Based Violence.

4.2   The University respects the rights of Victim-Survivors to choose the services and supports they feel are most appropriate, and to decide whether or not to report to the police or to file a Formal Report with the University. This includes respecting Victim-Survivors' rights not to report.

4.3   The University's policies, administrative processes and discipline systems are independent of the civil and criminal justice legal systems. University Community members allegedwho are reported to have perpetrated Sexual and Gender-Based Violence may be subject to the University's administrative processes and discipline systems in addition to the civil or criminal legal system.

4.4   This policy will be reviewed at least every three (3) years.

Consent

4.5   The University is committed to providing education on Consent and its relationship to Sexual and Gender-Based Violence.

4.6   Consent is the ongoing voluntary agreement of an individual(s) to engage in the sexual activity in question. More specifically, Consent:

   a)   is not silence or the absence of "no";
   b)   cannot be assumed or implied;
   c)   cannot be given by an individual incapacitated by alcohol, drugs or some other reason, or who is unconscious, under the age of consent or otherwise incapable of providing consent;
   d)   can be revoked at any time, whatever other sexual activities have taken place;
   e)   cannot be obtained through an abuse of power, threats, intimidations, coercion or other pressure tactics;
   f)   cannot be obtained through manipulation or misrepresentation; and
   g)   cannot be obtained if an individual abuses a position of trust or authority.

4.7   In Canada, the Criminal Code sets the age of consent to sexual activity at 16 years, with some exceptions. By law, an individual under the age of 18 cannot

consent where there is a relationship of trust, authority, or dependency such as an instructor, coach, tutor, or mentor.

4.8 All sexual acts without Consent constitute Sexual Assault and are a violation of this Policy.

Sexual Assault

4.9 Sexual Assault:
   a) is a criminal offence under the Criminal Code of Canada;
   b) includes a range of non-consensual sexual activities including oral contact (mouth to mouth, mouth to body part), groping, touching, oral sex, vaginal or anal penetration, and/or penetration with any object or body part;
   c) can be committed by a spouse, intimate or dating partner, a friend or acquaintance, a known individual in a position of trust or authority, including a spiritual or faith leader, a coach or a mentor, or a complete stranger;
   d) can occur regardless of sexual orientation, gender, gender identity, gender expression, or relationship status;
   e) occurs when an individual(s) engages in sexual activity with another individual(s) they know, or reasonably ought to have known, is incapacitated (e.g. by drug or alcohol use, unconsciousness, blackout, or as a result of a disability).

Confidentiality

4.10 Appropriate procedures for responding to a Formal Report ~~alleging Sexual Violence~~ will be followed to minimise the risk of re-traumatising individuals, ensure due process, and, except as set out in 4.11 - 4.14 and applicable legislation, to avoid breaching the privacy of anyone who reports or is involved in ~~alleged~~a report of Sexual and Gender-Based Violence.

4.11 The University will inform Victim-Survivors, Complainants, and Respondents, and everyone interviewed as part of an investigation into a Formal Report about the processes in place to safeguard confidentiality and the limits of confidentiality. Confidentiality cannot be assured if:
   a) an individual is judged to be at imminent risk of self-harm;
   b) an individual is judged to be at imminent risk of harming another;
   c) there is reason to believe that other University Community members or the broader community may be at risk of harm;
   d) reporting or action is required by law; or
   e) evidence of the ~~alleged~~reported Sexual and Gender-Based Violence is available in the public realm.

4.12 Subject to 4.11, the names of any individuals involved in ~~alleged~~reported Sexual and Gender-Based Violence~~, and the circumstances of the incidents,~~ will not be disclosed by the University to any person except where disclosure is necessary for the purposes of determining Interim Measures or of resolving the Formal Report and taking any related disciplinary measures.

4.13 A Complainant will ordinarily be informed of the following steps in resolving a Formal Report if the Formal Report concerns allegations of Sexual and Gender-Based Violence committed against that Complainant:

a) whether any Interim Measures have been, or will be implemented;

b) whether the Formal Report will be investigated, or otherwise addressed by the University;

c) a summary of allegations to be investigated;

d) the availability of a supported conversation (as described at 4.32 - 4.37), and proposed terms for that conversation;

e) the name of the individual assigned to facilitate a supported conversation

f) the name of any investigator assigned;

g) when any investigation begins;

h) updates on the progress of an investigation as appropriate; and

i) whether the investigator found that the allegations were substantiated or unsubstantiated.

4.14 If a Formal Report will be investigated by the Appropriate Office, a Respondent will ordinarily be informed of the information in 4.13 (other than the information about a supported conversation) as well as any disciplinary sanctions imposed following any investigation. The Respondent will be informed about a supported conversation if the Complainant is interested in pursuing that option to resolve a Formal Report.

4.15 The University will report to the Board of Governors on the number of Formal Reports. This data will not include any personal information that may identify a University Community member.

4.16 Records pertaining to the administration of this policy are the property of the University and will be retained in accordance with University document retention rules.

Disclosing and Responding to Sexual and Gender-Based Violence

4.17 Members of the University Community with concerns about an incident of Sexual and Gender-Based Violence are encouraged to contact the SVRO. The SVRO provides confidential support and care for any University Community member impacted by Sexual and Gender-Based Violence. The SVRO can assist individuals in accessing supports and in understanding available reporting options. The SVRO will not support both a Complainant and Respondent who are involved in the same Formal Report and will refer University Community members to alternate supports if they are not able to provide support.

4.18 Sexual and Gender-Based Violence response supports are available to any University Community member. Supports are available no matter when or where the individual experienced or witnessed Sexual and Gender-Based Violence, or who may be responsible for the harm. Supports available through the University include:

a) the SVRO;

b) physical health services including sexually transmitted infection and pregnancy testing at Student Wellness Services are available to all members of the University Community on a walk-in basis;

c) mental health and wellness supports. Students may access supports through Student Wellness Services. Employees, Postdoctoral Scholars, and Academic Staff Members can access supports including mental health consultations, counselling, assistance in locating emergency child/elder care, and legal consultations through Staff Wellness and the University's Employee and Family Assistance Program;

d) support for Indigenous Students through Writing Symbols Lodge;

e) safety planning through the SVRO and Campus Security;

f) peer supports for Students;

g) facilitation of safe living arrangements for Students living in residence; and

h) workplace and academic accommodations.

4.19 Any individual impacted by Sexual and Gender-Based Violence who is represented by a union or an association, has the right to seek the assistance of that union or association.

4.20 Members of the University Community who receive a Disclosure should provide information on resources available to the individual including information about the Sexual Violence Response Office (SVRO).

4.21 The SVRO is available for any member of the University Community with concerns about Sexual and Gender-Based Violence, and for anyone who is seeking information about options for making a Disclosure or Formal Report.

4.22 The priority in responding to a Disclosure or Formal Report will be providing support and ensuring an appropriate process for those affected. Concerns about potential violations of the University's alcohol, cannabis, smoking, or student non-academic misconduct policies, or residence services community standards, should not prevent reporting or disclosure of an incident of Sexual Violence. A Disclosure or Formal Report will only trigger an investigation into alleged violations of those policies and standards if such an investigation is required to ensure the University fulfills its duties in managing its learning, working, and living environment.and Gender-Based Violence.

4.23 Where the University becomes aware of allegations of Sexual and Gender-Based Violence by a University Community member or against a University Community member, the University will take all reasonable steps to mitigate risks to the health and safety of the University Community. This may involve the Threat Assessment Committee or Student at Risk Team, where appropriate. As part of this effort, the University may impose Interim Measures, including:

a) separation of the academic, living or workplace situations of any individuals allegedly involved in the incidentFormal Report or Disclosure of Sexual and Gender-Based Violence;

b) academic accommodations; or

c) no-contact orders issued by the University.

4.24 The following supports at the University are available to a Student, Academic Staff Member, Postdoctoral Scholar, or Employee, who is a Respondent in a Formal Report:

    a) Student Wellness Services or the Student Ombuds if they are a Student;

    b) Staff Wellness and the Employee Family Assistance Program if they are an Employee, Postdoctoral Scholar, or Academic Staff Member;

    c) Student Legal Assistance (SLA) for those who qualify, if it has capacity. If SLA is not able to assist they may suggest alternate options; and

    d) any applicable bargaining agent.

Formal Reports

4.25 A Disclosure is not a Formal Report and will not trigger an investigation unless the University becomes aware of a risk to other members of the University Community.

4.26 Victim-Survivors have options for filing a Formal Report or criminal complaint. Victim-Survivors are not required to file a Formal Report or a criminal complaint. Reporting options include:

    a) Criminal Reporting Option: individuals may report ~~their allegations~~ independently through the criminal justice system by contacting the Calgary Police Service or, if known, the law enforcement agency in the jurisdiction where the incident occurred. If an individual would like the support of the University in making a report with the appropriate law enforcement agency, the SVRO and Campus Security can facilitate making the report.

    b) Non-Criminal, On-Campus Formal Reports should be made to the Appropriate Office. If warranted, the Appropriate Office, Threat Assessment Committee, or Student at Risk Team may impose Interim Measures that infringe on the Respondent's access to the University.

4.27 There is no time limit for making a Formal Report; however, the University encourages individuals to make a Formal Report as soon as they are able to do so, recognizing that resolution may be more challenging the longer the period of time between an incident and a Formal Report.

4.28 This policy does not preclude individuals from filing a complaint in other venues such as under the grievance process of an applicable Collective Agreement, or filing a complaint of harassment or discrimination with an appropriate tribunal, or in a court of law. Such other venues or processes may impose time limits for filing a complaint.

4.29 Formal Reports may be made anonymously but the Complainant should be aware that this may limit the ability of the University to respond and investigate.

4.30 If a Respondent is subject to both a criminal complaint and a Formal Report, the University may consult with the relevant law enforcement agency before determining whether or when to proceed with the Formal Report.

4.31 A Complainant has the right to withdraw a Formal Report at any stage of the process. However, the University may have a duty to act on the issue identified in the Formal Report in order to comply with its obligations under this policy or its legal obligations. Interim Measures that do not infringe on the Respondent's access to the University may be maintained after a Formal Report is withdrawn.

Resolution Through Supported Conversations

4.32 If the Appropriate Office, the Complainant and the Respondent agree, ~~the allegations in~~ a Formal Report may be addressed through a supported conversation ~~without~~rather than an investigation or disciplinary process. Supported conversations are mediated discussions with the goal of developing mutual understanding of the incident(s) and mutually agreeable resolution of the Formal Report.

4.33 In all cases, supported conversations will be managed to create a safe environment for sensitive discussions.

4.34 The Appropriate Office will determine whether the University has jurisdiction to investigate a Formal Report and whether there is sufficient information to proceed with an investigation.

4.35 If the University has jurisdiction and sufficient information, the Complainant may discuss the option of a supported conversation with the Appropriate Office, or the SVRO.

4.36 If the Complainant chooses to proceed with a supported conversation the Appropriate Office or the SVRO will contact the Respondent. If the Respondent agrees to proceed with a supported conversation, the Appropriate Office will arrange for a trained, trauma informed facilitator to support conversations between the Complainant and Respondent to facilitate healing and resolution.

4.37 If there is no agreement on proceeding with a supported conversation, the Complainant will indicate whether ~~the~~they wish for investigation of the Formal Report to proceed. If the Complainant wishes to proceed, the Appropriate Office will appoint a trained, trauma-informed investigator, in accordance with the relevant University Procedure.

Investigation of Formal Reports ~~Alleging Sexual Violence~~

4.38 The investigation of Formal Reports must appropriately protect the rights of both the Complainant and the Respondent. An investigation of a Formal Report ~~alleging Sexual Violence~~ will usually include:
   a)   interview(s) with the Complainant;
   b)   interview(s) with the Respondent;
   c)   interview(s) with witnesses and potential witnesses;
   d)   collection and review of evidence; and
   e)   findings of fact made on the balance of probabilities.

4.39 Upon completion of the investigation, the investigator will prepare a report based on the interviews, statements, and other evidence collected. If an

allegation is substantiated, the report will document the impact of the Sexual and Gender-Based Violence or Reprisal on the Victim-Survivor. The Appropriate Office will receive the investigator's report and send it to the individual(s) responsible for disciplinary processes under the relevant University policies and Collective Agreements. The table below identifies who will receive the investigative report and determine appropriate disciplinary measures if an allegation is substantiated:

Member of the University Community (Respondent)	Recipient of Investigative Report
Student	Student Conduct Office
Academic Staff Member, Employee, Postdoctoral Scholar, Appointee	Senior Leadership Team Member for the faculty or department
Senior Leadership Team Member	Executive Leadership Team Member to whom they report.
Executive Leadership Team Member	The President and Vice-Chancellor
President and Vice-Chancellor	Chair of the University's Board of Governors
Contractors, Volunteers	Senior Leadership Team Member for the unit, faculty, or department who engaged the Respondent

Unsubstantiated Formal Reports

4.40 If a Complainant, in good faith, makes a Formal Report and the investigator determines that the allegations of Sexual Violence in the Formal Report are not substantiated, no record of the Formal Report or the investigator's report will be placed in the Complainant's or Respondent's student or human resource file; however the University will retain a record in compliance with the University's legal obligations.

Sanctions and Reprisals

4.41 An individual who is found to have breached this policy may be subject to disciplinary action up to and including termination of employment, expulsion from the University or termination of any other relationship they have with the University. Disciplinary action will be taken in accordance with the provisions of any applicable Collective Agreement. If the Respondent is a Student, the Student Conduct Office will receive the investigator's report and decide whether to invite the Respondent to a hearing to address the appropriate sanction. The Hearing Board will not include a Student, and will consist of individuals trained in trauma-informed adjudication who have not previously been involved in the incident in question

4.42 An individual who is found to have taken action in Reprisal may be subject to disciplinary action up to and including termination of employment, expulsion from the University or termination of any other relationship they have with the University. Disciplinary action will be taken in accordance with the provisions of any applicable Collective Agreement.

4.43 An individual who believes they may be the subject of Reprisal may notify the SVRO or the Appropriate Office. If the individual wishes to proceed with a Formal Report relating to the Reprisal the Appropriate Office will investigate in accordance with the relevant University Procedure.

Responsibilities **5** **5.1** All members of the University Community will:

    a) make themselves aware of this policy and their responsibilities under the policy;

    b) if an individual approaches them with concerns about Sexual and Gender-Based Violence, try to make the individual aware of the supports available to them.

5.2 The SVRO will:

    a) provide support including confidential consultation and assistance in accessing resources both on and off campus for any member of the University Community who may have been subject to or witnessed Sexual Violence and is seeking support in relation to Sexual and Gender-Based Violence;

    b) discuss options for resolution with Complainants; and

    c) assist in the creation of educational resources and training initiatives.

5.3 Campus Security will:

    a) respond to any calls they receive related to Sexual and Gender-Based Violence and may refer individuals to the SVRO or to other resources both on or off campus available to them; and

    b) provide supports such as safety planning, and, if requested, assistance in connecting with the appropriate police personnel for those individuals who choose to report to police.

Procedures **6** Student Non-Academic Misconduct Procedure
Workplace Investigation Procedures
Procedure for Protected Disclosures

Related Policies **7** Harassment Policy
Student Non-Academic Misconduct Policy
Student at Risk Policy
Code of Conduct
Workplace Violence Policy
Graduate Student Supervision Policy

Related Information **8** ucalgary.ca/sexualviolencesupport/ (This website includes information on resources that are available).
Other supports include:
http://www.calgarycasa.com/ccasaservices/crisis-intervention-and-counselling-programs/sexual-assault-response-team/
https://www.centreforsexuality.ca/
https://aasas.ca/ (Association of Alberta Sexual Assault Services)
http://www.connectnetwork.ca/ (Connect Family & Sexual Abuse Network)

***Indigenous supports to be added? (awaiting comment from Indigenous Lens Review Team)

History   9   *Approved:* May 26, 2017
Effective: June 1, 2017
Editorial Change: March 8, 2018
Revised: June 20, 2020
Revised: DATE

Sexual and Gender-Based Violence Policy

Classification Health, Safety & Environment	Table of Contents
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Purpose

1. The purpose of this policy is to:
   a) affirm the University's commitment to addressing Sexual and Gender-Based Violence. The University is striving to create an equitable, inclusive environment shaped by a culture of respect;
   b) commit to providing supports to individuals affected by Sexual and Gender-Based Violence, fostering and promoting a culture of consent, and appropriate handling of Disclosures and Formal Reports related to Sexual and Gender-Based Violence;
   c) outline the processes by which the University will respond to Disclosures and Formal Reports;
   d) recognize that Sexual and Gender-Based Violence will not be experienced by everyone in the same way, and each case will need to be assessed for differential impacts. Acts of Sexual and Gender-Based violence are rooted in systematic oppression, including colonialism, racism, sexism, homophobia, transphobia, or ableism;
   e) acknowledge that in a diverse university community like the University of Calgary, any response will need to reflect an intersectional lens, and assess if Sexual and Gender-Based Violence are compounded by other potential vulnerabilities, including sexual orientation, gender identity, gender expression, indigeneity, race/ethnicity, or religion.

Scope

2. This policy applies to all members of the University Community.

   This policy operates alongside other applicable University policies and procedures. Where there is a conflict or inconsistency between the provisions of this policy and

another University policy or procedure, this policy governs to the extent necessary to resolve the conflict or inconsistency. However, this policy does not replace or supersede the provisions of any Collective Agreement. Consequently, if there is a conflict between the provisions of this policy and a Collective Agreement, the Collective Agreement governs to the extent necessary to resolve the conflict.

This policy applies to actions, interactions and behaviours of members of the University Community that take place:
a) in or on University Facilities; or
b) off University Facilities where a member of the University Community is involved in the business of the University or activities related to the University, or is representing the University; or
c) off University Facilities, including through social media or other online means, where such actions, interactions or behaviour have a negative impact on a member of the University Community such that it materially interferes with their University learning, working or living environment.

Definitions   **3**   In this policy
a) "Academic Staff Member" means an individual who is engaged to work for the University and is identified as an academic staff member under Article 1 of the applicable Collective Agreement.

b) "Appointee" means an individual who is engaged to work for the University, or whose work is affiliated with the University, through a letter of appointment, including adjunct faculty, clinical appointments, and visiting researchers and scholars.

c) "Appropriate Office" means the office, identified in the table below that is the responsible for the procedure that would be followed if a Formal Report were investigated.

Member of the University Community (Respondent)	Office	Procedure
Student	Student Conduct	Student Non-Academic Misconduct Procedure
Employee	AVP Human Resources	Workplace Investigation Procedure
Academic Staff Member, Appointee, Contractor, Postdoctoral Scholar, Senior Leadership Team Member excepting Executive Leadership Team Members	Protected Disclosure and Research Integrity	Procedure for Protected Disclosures
Executive Leadership Team Member (excepting the	President and Vice-Chancellor	Procedure for Protected Disclosures

President and Vice-Chancellor)		
President and Vice-Chancellor	Chair of the Board of Governors	Procedure for Protected Disclosures

d) "Collective Agreement" means any collective agreement between the Governors of the University of Calgary and (i) the Faculty Association of the University of Calgary, (ii) the Alberta Union of Public Employees, (iii) the Graduate Students' Association, (iv) the Postdoctoral Association of the University of Calgary, or (v) any other association or union representing Employees, in each case, in effect at the relevant time.

e) "Complainant" means the individual who has made a Formal Report under this policy.

f) "Consent" means the ongoing voluntary agreement of an individual to engage in the sexual activity in question.

g) "Contractor" means an individual or a sole proprietorship, or an individual acting on behalf of any other legal entity, who agrees to furnish materials to, or perform services for, the University for consideration.

h) "Disclosure" means when an individual shares information about a personal experience of Sexual and Gender-Based Violence with an Academic Staff Member, Appointee, Employee, Postdoctoral Scholar or Student.

i) "Employee" means an individual, other than an Academic Staff Member, Appointee or Postdoctoral Scholar, who is engaged to work for the University under an employment contract.

j) "Executive Leadership Team" means the executive leadership team at the University, which is comprised of the President, Vice-Presidents, and General Counsel.

k) "Field Stations" means any of the following University Facilities:
   i. Rothney Astrophysical Observatory;
   ii. Barrier Lake Research Station;
   iii. R.B. Miller Research Station; and
   iv. Kluane Lake Research Station.

l) "Formal Report" means a complaint to the University by an individual who is seeking recourse for a violation of this policy.

m) "Gender-Based Violence" means any violence, physical or psychological, targeting an individual because of their gender, gender identity, or gender expression.

n) "Interim Measures" means restrictions or adjustments implemented in an effort to maintain a positive, productive, and respectful learning, working, and living environment on University Facilities, pending the resolution of a Formal Report, police investigation, or other process. Interim Measures may also be implemented to support a Victim-Survivor who is considering whether or not to proceed with a formal process or who has decided not to proceed with a formal process.

o) "Postdoctoral Scholar" means an individual who has completed a doctoral degree and is carrying out research at the University under the direction or mentorship of a supervising Academic Staff Member.

p) "Reprisal" means a Retaliatory Measure taken against an individual because they have sought advice about making a Disclosure or Formal Report, made a Disclosure or Formal Report in good faith, co-operated in an investigation of a Formal Report, or declined to participate in behavior that would breach this policy.

q) "Respondent" means the member of the University Community identified in a Formal Report to have violated this policy.

r) "Retaliatory Measure" means any act intending to adversely affect an individual.

s) "Senior Leadership Team" refers to the individuals who, at the relevant time, are designated as members of the University's Senior Leadership Team.

t) "Sexual Assault" means any type of unwanted sexual act done by one individual to another that violates the sexual integrity of the individual as more fully described in 4.10.

u) "Sexual Harassment" means unwanted remarks, behaviours or communications of a sexual nature and/or unwanted remarks, behaviours or communications based on sex, gender identity, gender expression, or sexual orientation, where the individual responsible for the remarks, behaviours or communications knows or ought reasonably to know that these are unwanted.

v) "Sexual and Gender-Based Violence" means any violence, physical or psychological, that is committed, threatened or attempted against an individual without the individual's consent and by targeting sex, gender identity, gender expression, or sexual orientation. This includes, but is not limited to, Gender-Based Violence, Sexual Assault, Sexual Harassment, stealthing, indecent exposure, voyeurism, degrading sexual imagery, the acquisition or distribution of a sexual image or video of a University Community member without their consent, and stalking when it targets an individual based on their sex, gender identity, gender expression or sexual orientation. It can include a single incident or a pattern of behaviour whether in person, online, or via other means.

w) "Sexual Violence Response Office (SVRO)" means the University office which provides support to any University Community member who may have experienced Sexual and Gender-Based Violence and provides expert advice to members of the University Community who receive Disclosures and Formal Reports.

x) "Student" means an individual registered in a University course or program of study at the time the incident of Sexual and Gender Based Violence is said to have occurred.

y) "Student at Risk Team" means a multi-disciplinary resource team comprised of University staff members representing Student Wellness, Campus Security (as required), Student Services, Residence Services and ad hoc committee members that coordinates intervention and support in response to At-Risk Behaviour (as defined in the Student-at-Risk Policy).

z) "Student Legal Assistance (SLA)" means the on-campus law clinic staffed by Students.

aa) "Student Ombuds" means the Employee who has the title Student Ombuds and provides a safe place for Students to confidentially discuss Student related issues, academic and non-academic concerns, and other matters.

bb) "Threat Assessment Committee" means a multi-disciplinary resource team comprised of University staff members representing Campus Security, Human Resources, Student Services, Student Wellness and Staff Wellness, and ad hoc committee members, that responds to reports of actual or potential workplace violence as provided for in the Workplace Violence Policy

cc) "University" means University of Calgary.

dd) "University Community" means all Academic Staff Members, Appointees, Employees, Postdoctoral Scholars, Students, Contractors and Volunteers.

ee) "University Facilities" means all buildings and grounds, including athletic and recreational fields, and Field Stations, owned, leased or operated by the University, except for property managed by University of Calgary Properties Group Ltd.

ff) "Victim - Survivor" means, an individual who has experienced Sexual and Gender-Based Violence. Not all people who have experienced Sexual and Gender-Based Violence identify with either term. Individuals can choose whether to be referred to as the victim, the survivor, the Victim-Survivor, or by name in any Disclosure. Individuals asking the University to investigate a Formal Report will be referred to as Complainants.

gg) "Volunteer" means an individual who, on a voluntary basis, provides a service or materials to the University.

4 General

4.1 All members of the University Community have the right to learn, work, and live in an environment where they are free from harassment, discrimination and violence. The University:

    a) will promote a culture of respect so that those who make a Disclosure or Formal Report are treated respectfully;

    b) has investigation processes that protect the rights of all individuals;

    c) will provide training to Academic Staff Members, Appointees, Employees, Postdoctoral Scholars and Students on how to respond to a Disclosure of Sexual and Gender-Based Violence; and

    d) will implement awareness, education and risk management programs to address the prevention of Sexual and Gender-Based Violence.

4.2 The University respects the rights of Victim-Survivors to choose the services and supports they feel are most appropriate, and to decide whether to report to the police or to file a Formal Report with the University. This includes respecting Victim-Survivors' rights not to report.

4.3 The University's policies, administrative processes and discipline systems are independent of the civil and criminal justice legal systems. University Community members who are reported to have perpetrated Sexual and Gender-Based Violence may be subject to the University's administrative processes and discipline systems in addition to the civil or criminal legal system.

4.4 This policy will be reviewed at least every three (3) years.

Consent

4.5 The University is committed to providing education on Consent and its relationship to Sexual and Gender-Based Violence.

4.6 Consent is the ongoing voluntary agreement of an individual(s) to engage in the sexual activity in question. More specifically, Consent:

    a) is not silence or the absence of "no";

    b) cannot be assumed or implied;

    c) cannot be given by an individual incapacitated by alcohol, drugs or some other reason, or who is unconscious, under the age of consent or otherwise incapable of providing consent;

    d) can be revoked at any time, whatever other sexual activities have taken place;

    e) cannot be obtained through an abuse of power, threats, intimidations, coercion or other pressure tactics;

    f) cannot be obtained through manipulation or misrepresentation; and

    g) cannot be obtained if an individual abuses a position of trust or authority.

4.7 In Canada, the Criminal Code sets the age of consent to sexual activity at 16 years, with some exceptions. By law, an individual under the age of 18 cannot consent where there is a relationship of trust, authority, or dependency such as an instructor, coach, tutor, or mentor.

4.8   All sexual acts without Consent constitute Sexual Assault and are a violation of this Policy.

Sexual Assault

4.9   Sexual Assault:
  a) is a criminal offence under the Criminal Code of Canada;
  b) includes a range of non-consensual sexual activities including oral contact (mouth to mouth, mouth to body part), groping, touching, oral sex, vaginal or anal penetration, and/or penetration with any object or body part;
  c) can be committed by a spouse, intimate or dating partner, a friend or acquaintance, a known individual in a position of trust or authority, including a spiritual or faith leader, a coach or a mentor, or a complete stranger;
  d) can occur regardless of sexual orientation, gender, gender identity, gender expression, or relationship status;
  e) occurs when an individual(s) engages in sexual activity with another individual(s) they know, or reasonably ought to have known, is incapacitated (e.g. by drug or alcohol use, unconsciousness, blackout, or as a result of a disability).

Confidentiality

4.10   Appropriate procedures for responding to a Formal Report will be followed to minimise the risk of re-traumatising individuals, ensure due process, and, except as set out in 4.11 - 4.14 and applicable legislation, to avoid breaching the privacy of anyone who reports or is involved in a report of Sexual and Gender-Based Violence.

4.11   The University will inform Victim-Survivors, Complainants, and Respondents, and everyone interviewed as part of an investigation into a Formal Report about the processes in place to safeguard confidentiality and the limits of confidentiality. Confidentiality cannot be assured if:
  a) an individual is judged to be at imminent risk of self-harm;
  b) an individual is judged to be at imminent risk of harming another;
  c) there is reason to believe that other University Community members or the broader community may be at risk of harm;
  d) reporting or action is required by law; or
  e) evidence of the reported Sexual and Gender-Based Violence is available in the public realm.

4.12   Subject to 4.11, the names of any individuals involved in reported Sexual and Gender-Based Violence will not be disclosed by the University to any person except where disclosure is necessary for the purposes of determining Interim Measures or of resolving the Formal Report and taking any related disciplinary measures.

4.13 A Complainant will ordinarily be informed of the following steps in resolving a Formal Report if the Formal Report concerns allegations of Sexual and Gender-Based Violence committed against that Complainant:
   a)   whether any Interim Measures have been, or will be implemented;
   b)   whether the Formal Report will be investigated, or otherwise addressed by the University;
   c)   a summary of allegations to be investigated;
   d)   the availability of a supported conversation (as described at 4.32 - 4.37), and proposed terms for that conversation;
   e)   the name of the individual assigned to facilitate a supported conversation
   f)   the name of any investigator assigned;
   g)   when any investigation begins;
   h)   updates on the progress of an investigation as appropriate; and
   i)   whether the investigator found that the allegations were substantiated or unsubstantiated.

4.14 If a Formal Report will be investigated by the Appropriate Office, a Respondent will ordinarily be informed of the information in 4.13 (other than the information about a supported conversation) as well as any disciplinary sanctions imposed following any investigation. The Respondent will be informed about a supported conversation if the Complainant is interested in pursuing that option to resolve a Formal Report.

4.15 The University will report to the Board of Governors on the number of Formal Reports. This data will not include any personal information that may identify a University Community member.

4.16 Records pertaining to the administration of this policy are the property of the University and will be retained in accordance with University document retention rules.

Disclosing and Responding to Sexual and Gender-Based Violence
4.17 Members of the University Community with concerns about an incident of Sexual and Gender-Based Violence are encouraged to contact the SVRO. The SVRO provides confidential support and care for any University Community member impacted by Sexual and Gender-Based Violence. The SVRO can assist individuals in accessing supports and in understanding available reporting options.   The SVRO will not support both a Complainant and Respondent who are involved in the same Formal Report and will refer University Community members to alternate supports if they are not able to provide support.

4.18 Sexual and Gender-Based Violence response supports are available to any University Community member. Supports are available no matter when or where the individual experienced or witnessed Sexual and Gender-Based Violence, or who may be responsible for the harm. Supports available through the University include:
   a)   the SVRO;
   b)   physical health services including sexually transmitted infection and

pregnancy testing at Student Wellness Services are available to all members of the University Community on a walk-in basis;

c) mental health and wellness supports. Students may access supports through Student Wellness Services. Employees, Postdoctoral Scholars, and Academic Staff Members can access supports including mental health consultations, counselling, assistance in locating emergency child/elder care, and legal consultations through Staff Wellness and the University's Employee and Family Assistance Program;

d) support for Indigenous Students through Writing Symbols Lodge;

e) safety planning through the SVRO and Campus Security;

f) peer supports for Students;

g) facilitation of safe living arrangements for Students living in residence; and

h) workplace and academic accommodations.

4.19 Any individual impacted by Sexual and Gender-Based Violence who is represented by a union or an association, has the right to seek the assistance of that union or association.

4.20 Members of the University Community who receive a Disclosure should provide information on resources available to the individual including information about the Sexual Violence Response Office (SVRO).

4.21 The SVRO is available for any member of the University Community with concerns about Sexual and Gender-Based Violence, and for anyone who is seeking information about options for making a Disclosure or Formal Report.

4.22 The priority in responding to a Disclosure or Formal Report will be providing support and ensuring an appropriate process for those affected. Concerns about potential violations of the University's alcohol, cannabis, smoking, or student non-academic misconduct policies, or residence services community standards, should not prevent reporting or disclosure of an incident of Sexual and Gender-Based Violence.

4.23 Where the University becomes aware of allegations of Sexual and Gender-Based Violence by a University Community member or against a University Community member, the University will take all reasonable steps to mitigate risks to the health and safety of the University Community. This may involve the Threat Assessment Committee or Student at Risk Team, where appropriate. As part of this effort, the University may impose Interim Measures, including:

a) separation of the academic, living or workplace situations of any individuals involved in the Formal Report or Disclosure of Sexual and Gender-Based Violence;

b) academic accommodations; or

c) no-contact orders issued by the University.

4.24 The following supports at the University are available to a Student, Academic Staff Member, Postdoctoral Scholar, or Employee, who is a Respondent in a Formal Report:

a) Student Wellness Services or the Student Ombuds if they are a Student;

b) Staff Wellness and the Employee Family Assistance Program if they are an Employee, Postdoctoral Scholar, or Academic Staff Member;

c) Student Legal Assistance (SLA) for those who qualify, if it has capacity. If SLA is not able to assist they may suggest alternate options; and

d) any applicable bargaining agent.

Formal Reports

4.25 A Disclosure is not a Formal Report and will not trigger an investigation unless the University becomes aware of a risk to other members of the University Community.

4.26 Victim-Survivors have options for filing a Formal Report or criminal complaint. Victim-Survivors are not required to file a Formal Report or a criminal complaint. Reporting options include:

a) Criminal Reporting Option: individuals may report independently through the criminal justice system by contacting the Calgary Police Service or, if known, the law enforcement agency in the jurisdiction where the incident occurred. If an individual would like the support of the University in making a report with the appropriate law enforcement agency, the SVRO and Campus Security can facilitate making the report.

b) Non-Criminal, On-Campus Formal Reports should be made to the Appropriate Office. If warranted, the Appropriate Office, Threat Assessment Committee, or Student at Risk Team may impose Interim Measures that infringe on the Respondent's access to the University.

4.27 There is no time limit for making a Formal Report; however, the University encourages individuals to make a Formal Report as soon as they are able to do so, recognizing that resolution may be more challenging the longer the period of time between an incident and a Formal Report.

4.28 This policy does not preclude individuals from filing a complaint in other venues such as under the grievance process of an applicable Collective Agreement, or filing a complaint of harassment or discrimination with an appropriate tribunal, or in a court of law.   Such other venues or processes may impose time limits for filing a complaint.

4.29 Formal Reports may be made anonymously but the Complainant should be aware that this may limit the ability of the University to respond and investigate.

4.30 If a Respondent is subject to both a criminal complaint and a Formal Report, the University may consult with the relevant law enforcement agency before determining whether or when to proceed with the Formal Report.

4.31 A Complainant has the right to withdraw a Formal Report at any stage of the process. However, the University may have a duty to act on the issue identified in the Formal Report in order to comply with its obligations under this policy or its legal obligations. Interim Measures that do not infringe on the Respondent's access to the University may be maintained after a Formal Report is withdrawn.

Resolution Through Supported Conversations

4.32 If the Appropriate Office, the Complainant and the Respondent agree, a Formal Report may be addressed through a supported conversation rather than an investigation or disciplinary process. Supported conversations are mediated discussions with the goal of developing mutual understanding of the incident(s) and mutually agreeable resolution of the Formal Report.

4.33 In all cases, supported conversations will be managed to create a safe environment for sensitive discussions.

4.34 The Appropriate Office will determine whether the University has jurisdiction to investigate a Formal Report and whether there is sufficient information to proceed with an investigation.

4.35 If the University has jurisdiction and sufficient information, the Complainant may discuss the option of a supported conversation with the Appropriate Office, or the SVRO.

4.36 If the Complainant chooses to proceed with a supported conversation the Appropriate Office or the SVRO will contact the Respondent. If the Respondent agrees to proceed with a supported conversation, the Appropriate Office will arrange for a trained, trauma informed facilitator to support conversations between the Complainant and Respondent to facilitate healing and resolution.

4.37 If there is no agreement on proceeding with a supported conversation, the Complainant will indicate whether they wish for investigation of the Formal Report to proceed. If the Complainant wishes to proceed, the Appropriate Office will appoint a trained, trauma-informed investigator, in accordance with the relevant University Procedure.

Investigation of Formal Reports

4.38 The investigation of Formal Reports must appropriately protect the rights of both the Complainant and the Respondent. An investigation of a Formal Report will usually include:
   a) interview(s) with the Complainant;
   b) interview(s) with the Respondent;
   c) interview(s) with witnesses and potential witnesses;
   d) collection and review of evidence; and
   e) findings of fact made on the balance of probabilities.

4.39 Upon completion of the investigation, the investigator will prepare a report based on the interviews, statements, and other evidence collected. If an allegation is substantiated, the report will document the impact of the Sexual and Gender-Based Violence or Reprisal on the Victim-Survivor. The Appropriate Office will receive the investigator's report and send it to the individual(s) responsible for disciplinary processes under the relevant University policies and Collective Agreements. The table below identifies who will receive the investigative report and determine appropriate disciplinary measures if an allegation is substantiated:

Member of the University Community (Respondent)	Recipient of Investigative Report
Student	Student Conduct Office
Academic Staff Member, Employee, Postdoctoral Scholar, Appointee	Senior Leadership Team Member for the faculty or department
Senior Leadership Team Member	Executive Leadership Team Member to whom they report.
Executive Leadership Team Member	The President and Vice-Chancellor
President and Vice-Chancellor	Chair of the University's Board of Governors
Contractors, Volunteers	Senior Leadership Team Member for the unit, faculty, or department who engaged the Respondent

Unsubstantiated Formal Reports

4.40 If a Complainant, in good faith, makes a Formal Report and the investigator determines that the allegations in the Formal Report are not substantiated, no record of the Formal Report or the investigator's report will be placed in the Complainant's or Respondent's student or human resource file; however the University will retain a record in compliance with the University's legal obligations.

Sanctions and Reprisals

4.41 An individual who is found to have breached this policy may be subject to disciplinary action up to and including termination of employment, expulsion from the University or termination of any other relationship they have with the University. Disciplinary action will be taken in accordance with the provisions of any applicable Collective Agreement. If the Respondent is a Student, the Student Conduct Office will receive the investigator's report and decide whether to invite the Respondent to a hearing to address the appropriate sanction. The Hearing Board will not include a Student, and will consist of individuals trained in trauma-informed adjudication who have not previously been involved in the incident in question

4.42 An individual who is found to have taken action in Reprisal may be subject to disciplinary action up to and including termination of employment, expulsion from the University or termination of any other relationship they have with the University. Disciplinary action will be taken in accordance with the provisions of any applicable Collective Agreement.

4.43 An individual who believes they may be the subject of Reprisal may notify the SVRO or the Appropriate Office. If the individual wishes to proceed with a Formal Report relating to the Reprisal the Appropriate Office will investigate in accordance with the relevant University Procedure.

Responsibilities	**5**	**5.1**	All members of the University Community will:
			a) make themselves aware of this policy and their responsibilities under the policy;
			b) if an individual approaches them with concerns about Sexual and Gender-Based Violence, try to make the individual aware of the supports available to them.

5.2 The SVRO will:
   a) provide support including confidential consultation and assistance in accessing resources both on and off campus for any member of the University Community who is seeking support in relation to Sexual and Gender-Based Violence;
   b) discuss options for resolution with Complainants; and
   c) assist in the creation of educational resources and training initiatives.

5.3 Campus Security will:
   a) respond to any calls they receive related to Sexual and Gender-Based Violence and may refer individuals to the SVRO or to other resources both on or off campus available to them; and
   b) provide supports such as safety planning, and, if requested, assistance in connecting with the appropriate police personnel for those individuals who choose to report to police.

Procedures   **6**   Student Non-Academic Misconduct Procedure
Workplace Investigation Procedures
Procedure for Protected Disclosures

Related Policies   **7**   Harassment Policy
Student Non-Academic Misconduct Policy
Student at Risk Policy
Code of Conduct
Workplace Violence Policy
Graduate Student Supervision Policy

Related Information   **8**   ucalgary.ca/sexualviolencesupport/ (This website includes information on resources that are available).
Other supports include:
http://www.calgarycasa.com/ccasaservices/crisis-intervention-and-counselling-programs/sexual-assault-response-team/
https://www.centreforsexuality.ca/
https://aasas.ca/ (Association of Alberta Sexual Assault Services)
http://www.connectnetwork.ca/ (Connect Family & Sexual Abuse Network)
***Indigenous supports to be added? (awaiting comment from Indigenous Lens Review Team)

History   **9**   *Approved:* May 26, 2017
Effective: June 1, 2017
Editorial Change: March 8, 2018
Revised: June 20, 2020
Revised: DATE

GENERAL FACULTIES COUNCIL
INFORMATION BRIEFING NOTE

SUBJECT: Child Health and Wellness Research Strategy

PROPONENT(S)

Dr. Susa Benseler – Lead, Child Health and Wellness; director, Alberta Children's Hospital Research Institute
Dr. William Ghali – Vice-President (Research) (VPR)
Dr. Penny Pexman – Associate Vice-President (Research)

PURPOSE

To share the completed Child Health and Wellness (CHW) Research Strategy with the General Faculties Council (GFC).

OVERVIEW

The CHW Research Strategy has been developed through in-depth consultation by an interdisciplinary community of scholars over the past 18 months. We are sharing the completed research strategy.

The CHW Research Strategy outlines how our researchers, AHS health care providers, and community partners will work together to make an impact on five grand challenges in the area of Child Health and Wellness.

KEY POINTS

- CHW is a joint enterprise that aligns with the UCalgary Research Plan, the Alberta Children's Hospital Strategic Plan, the Alberta Children's Hospital Foundation's Strategic Plan, and supports Alberta Health Services' commitment to patient and family engagement.
- It is founded upon a bibliometric analysis of more than 35,000 child-health and wellness research publications across the UCalgary academy.
- Years of hard work and consultation among researchers, health care practitioners, and community leaders led to a series of town halls in 2019 including: 600 participants, 50 small group discussions, 24 research presentations and 70 worksheet submissions on grand challenges in child health and wellness.
- Engaging children, families and community partners is essential to this strategy and its success.

BACKGROUND

Child Health and Wellness was selected by the VPR as an emerging cross-cutting research theme in 2019 and received an injection of funds from the VPR Office to support development of the strategy.

The CHW team, led by Dr. Susa Benseler, conducted consultations across the campus community and with child and youth serving agencies throughout 2019 to assess capacity and potential for impact. Consultations also included external stakeholders, families and community leaders, as well as national research advisors from Sick Kids and the Gairdner Foundation.

The resulting strategy and its five grand challenges reflect the information gathered in those consultations, combined with the research strength assessment. The plan is designed to accelerate discoveries that will translate into impact for children and families.

ROUTING AND PERSONS CONSULTED

Progress	Body	Date	Approval	Recommendation	Discussion	Information
	Thought Leaders for the CHW Strategic Research Theme	2020-02-21			X	
	VPR Ops	2020-03-18			X	
	VPR	2020-09-01	X			
	Executive Leadership Team	2020-09-03	X			
	Research and Scholarship Committee	2020-09-17				X
X	General Faculties Council	2020-10-08				X
	Board of Governors	2020-10-16				X

NEXT STEPS

The completed strategy will go to the Board of Governors on October 16, 2020. The theme will then be launched publicly in November 2020.

SUPPORTING MATERIALS

Child Health and Wellness Research Strategy PDF, Executive Summary, and Grand Challenges.

Child Health and Wellness Strategy

UNIVERSITY OF CALGARY

**This strategy is dedicated to the children and families we serve.
They are at the heart of this plan and our research.**

Territorial Acknowledgement

We acknowledge that the University of Calgary resides on the traditional territories of the people of the Treaty 7 region in Southern Alberta, which includes the Blackfoot Confederacy (comprising the Siksika, Piikani, and Kainai First Nations), as well as the Tsuut'ina First Nation, and the Stoney Nakoda (including the Chiniki, Bearspaw, and Wesley First Nations). The City of Calgary is also home to Métis Nation of Alberta, Region III. The University of Calgary is situated on land adjacent to where the Bow River meets the Elbow River and the traditional Blackfoot name of this place is "Moh'kins'tsis", which we now call the City of Calgary.

Summary

Child health research is life trajectory research. Exposures, inherent conditions, and stresses during early life have life-long and sometimes multi-generational consequences. Many conditions that manifest in adulthood arise from the complex interplay of biology and environment as children develop and grow. Conditions that arise in infancy and childhood account for the largest proportion of the total human burden of disease. That means when we address harmful exposures, effectively treat inherent conditions, and remediate stressors in infancy and childhood, the benefits to human health are monumental. Furthermore, better understanding of the factors that set the foundation for well-being across the lifespan will better equip parents, caregivers, and service providers to set children on the optimal trajectory.

 The well-being of children and families is at the heart of our work. This is the central motivation behind the University of Calgary Child Health and Wellness Strategy. Child health has long been the focus of a diverse group of researchers at the University of Calgary. With four decades of generous support from the community, this group has grown significantly in size, sophistication and reputation. Today, this group includes over 300 principal investigators and well over 700 trainees and research staff. Their strengths are impressive: Child Health and Wellness researchers attracted $200M in external research funding in the last five years. These researchers **publish and attract citations at an impressive rate** and many are **international leaders** in their fields. Many child health and wellness research teams are embedded within the Alberta Children's Hospital and other health care settings, while others routinely collaborate with healthcare providers and still others work closely with community organizations whose mission centres on child health and wellness. The wider Calgary community is also fortunate to have incredible support from our community leaders and, in particular, the Alberta Children's Hospital Foundation. This combination – a **critical mass** in the quality and quantity of research, the **close integration** of research with organizations that care for children and their families, and the **generous support** of our community leaders – makes now the perfect time to take Child Health and Wellness research at the University of Calgary to the next level. The impact will be better health and wellbeing of children and their families here and around the world.

 To develop our strategy, we embarked on an **ambitious journey** to engage Child Health and Wellness researchers across campus, in addition to child and youth-facing agencies, community members and leaders. This journey, **involving 640 participants from 40 organizations**, illuminated the '**sweet spot' for child health and wellness**: the intersection between our research strengths, the needs of our community, and relevant trends and opportunities. The high level goals of this strategy are to: 1) Conduct **high quality, internationally-recognized** child health and wellness research for **children and families**; 2)

Become national and international leaders in **innovative and transformative** research from bench to bedside to backyard and back; 3) Advance national leadership in **community-partnered, child and family-centred** health and wellness research, and 4) Lead **evidence creation, evidence-informed health promotion, and policy development** with and for children and their families in Alberta and beyond.

To achieve these goals, we developed seven objectives, each with specific, measurable and achievable targets. Our objectives are to: (1) Foster a **strong culture and community** of research excellence; (2) Drive forward impactful science through **strength-based research programs**; (3) **Enable cutting-edge research**; (4) **Equip and foster the next generation** of Child Health and Wellness researchers; (5) **Partner with community, children, families and leaders** to address needs in child health and wellness through research; (6) Support Child Health and Wellness researchers to have **international impact**; and (7) Build a **durable support framework** to sustain the strategy. By **mobilizing multidisciplinary research teams and working shoulder to shoulder with our broader community**, we will ensure that discoveries translate into impact for children and families in Southern Alberta and far beyond.

This five-year plan is designed to **capture and learn from the knowledge and lived experiences of children and their families and translate those learnings into tangible outcomes in our community**. We know that issues in child health are complex and require **teams with diverse skills, knowledge and perspectives**. Accordingly, our strategic focus is to build a **dynamic, collaborative culture** that spans the UCalgary research community and our partners, locally and internationally, to address grand challenges in Child Health and Wellness. Furthermore, we value **excellence in both knowledge creation and its translation into practice**. For this reason, we have embedded high standards of peer review and transparency into this plan to ensure that we allocate resources to drive the very best in research and maximize its translation to care. Across all areas of investigation, what continues to unite our researchers is the knowledge that when we improve the health and wellness of children, they grow up to be healthier adults. This reduces human suffering, lowers healthcare costs and builds strong and productive communities.

Contents

Child Research is Life Trajectory Research

Health and wellness challenges early in life are critically important because of their immediate impacts on children and their families and because of their downstream impacts – they can alter the life-course of a child. Early life exposure and the complex interplay of inherited and environmental factors can lead to long-term effects and chronic diseases in adults. Insults during early life often have disproportionate costs and consequences. Adverse events during pregnancy and fetal development can have life-long and even multi-generational consequences. For example, preterm birth remains the main cause of child-related mortality around the world and Calgary has one of the highest preterm birth rates in Alberta.

Child health and wellness is foundational to human health.

The global burden of childhood disease is staggering. Data from the international Global Burden of Disease project clearly show that the burden of diseases of infancy and childhood dwarf all other health issues in terms of years of life lost to death or disability. Neonatal conditions and diseases as a group are the largest contributors to the global burden of disease by this measure. This is true both in Canada and worldwide (**Figure 1**). Preventing and treating threats to health and development in childhood maximizes the return on investment because of the fundamental potential to alter life trajectories and ensure that these children – and future generations – reach their full potential. Optimizing early life conditions, including prenatal conditions, promotes a trajectory of health and wellness. Furthermore, **investment in early childhood development is more effective, both socially and economically, than investment in later life remediation**.[1]

The Global Burden of Disease project measures the impact of health issues as potential life lost due to early death or productive life lost to disability. Did you know that diseases during pregnancy and infancy take a greater toll on human health by this measure than diseases of all other age groups combined?

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[1] Statement adapted from Professor Heckman in "The Heckman Equation Brochure": https://heckmanequation.org/resource/the-heckman-equation-brochure/
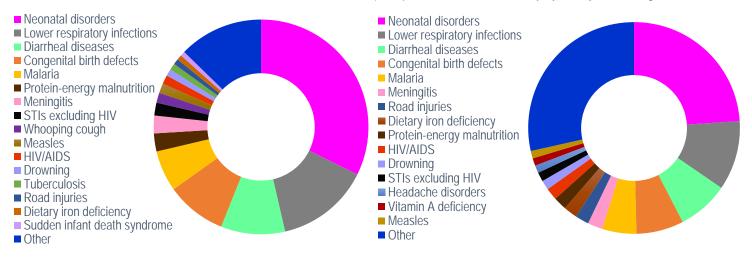
Figure 1: The burden of diseases of infancy and childhood measures in disability adjusted life years (DALY's). Source: Global health data exchange (http://ghdx.healthdata.org/gbd-results-tool).

i): Global burden of disability and disease by age.

ii): Top causes of death or injury <5 years of age.

iii): Top causes of death or injury <20 years of age.

Research Drives Impact

Improving child health and wellness requires more than resources; it also requires advances in knowledge driven by research. Research is at the heart of all of our advances in effective interventions, accurate predictions and diagnoses, effective and efficient health care systems, and strong public policies that enable children to thrive. **The application of knowledge is key to improving the human condition.**

Modern research is a grand-scale endeavour to systematize knowledge creation via scientific reasoning, discourse and debate. Researchers disseminate, curate and preserve knowledge via the academic literature.

Knowledge requires understanding to have impact. With knowledge and understanding come innovation. However, the relationship between academic literature and innovations that lead to improvements in child health and wellness is complex. For example, it takes 17 years, on average, for evidence from randomized controlled trials to make its way into practice.[2]

"Academic publishing is the first-order product of knowledge creation. This is where knowledge is reviewed, discussed and curated for future use. It is a resource accessed by industry, governments, NGOs, educators and researchers. Contributing to the growth and evolution of knowledge via publishing is a core function of a research institute." – Dr. Benedikt Hallgrimsson, ACHRI Scientific Director – Basic Science

Meaningful advances tend to be embedded in dense networks of knowledge within academic literature upon which innovators from many sectors, both private and public, build new tools, treatments or practices that improve health.[3] **The path from discovery to innovation and impact is rarely direct or simple.** It requires **participation and partnership – with children and all those who contribute to their futures**, including families, service providers, healthcare professionals, and influencers from all disciplines and sectors. We will continue to focus our research efforts on areas in which we are poised for effecting positive change in child health and wellness, based on our strengths and building on the central theme of the University of Calgary Strategic Research Plan.

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[2] "Crossing the Quality Chasm: A new health system for the 21st century" Published by the former Institute of Medicine in 2001; brief report available at:
http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2001/Crossing-the-Quality-Chasm/Quality%20Chasm%202001%20%20report%20brief.pdf

[3] Jaffe, Adam B., and Manuel Trajtenberg. *Patents, citations, and innovations: A window on the knowledge economy*. MIT press, 2002.

The University of Calgary Opportunity

The University of Calgary (UCalgary) provides the ideal environment for building teams to address the grand challenges of Child Health and Wellness. Our culture is entrepreneurial and innovative and our Eyes High Strategy seeks to build a community of "discovery, creativity and innovation."[4] The UCalgary Strategic Research Plan seeks to **create impact by matching strengths to opportunities, building research capacity, and driving innovation**.[5] The University is currently focusing its efforts to achieve these goals through six cross-cutting research themes that recognize major areas of research strength within the academy (**Figure 2**).

With the success of these research themes, it is now time to expand our focus to new areas of strength for the University of Calgary. Child Health and Wellness, along with One Health[6], were selected as the two major emerging areas of research strength. Child Health and Wellness researchers already integrate closely with several of the existing research themes and our community of scholars is uniquely positioned to harness the power of partnership and contribute to the successes of the existing (and emerging) research themes.

Figure 2: The current University of Calgary Strategic Research Themes - Complementing existing research strengths

Cross-pollinating research themes. Active large-scale child health research programs are already engaged with the Infections, Inflammation and Chronic Diseases theme through the International Microbiome Centre, with the Brain and Mental Health theme through neuroimaging and neurostimulation platforms, and with the Engineering Solutions for Health: Biomedical Engineering theme through interdisciplinary trainee projects and the student-led Innovation4Health Health Hack. Researchers studying social determinants of child health and wellness integrate closely with the Human Dynamics in a Changing World theme. Several of our researchers are ready to engage with the emerging One Health research theme in areas such as antibiotic stewardship during the early years of life.

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[4] University of Calgary Eyes High Strategy 2017-2022
[5] University of Calgary Strategic Research Plan 2018-2023
[6] https://vet.ucalgary.ca/news/funds-injected-support-cross-cutting-research-strengths

Child Health and Wellness and UCalgary's innovation landscape

Several other campus-wide developments and strategies contribute to a rich environment of support for Child Health and Wellness. The commercialization and social innovation landscape at UCalgary supports all stages of innovation, from idea to market testing to scale-up, through the recently established Hunter Hub for Entrepreneurial Thinking[7], the recently reorganized Innovate Calgary[8], and the internationally positioned Creative Destruction Lab[9] (Rockies location).

UCalgary is working to address **equity, diversity** and **inclusion** gaps in the entrepreneurial landscape with **WELab**, a federally-funded training program for women[10]. In the health context, the **Life Sciences Innovation Hub[11]** offers physical space and resources (including IMPACT: Integrated Management Platform to Accelerate Clinical Trials) for commercialization and

"The child health and wellness cross-cutting theme is destined for success at the University of Calgary because of its support for social innovation. This support enables effective community-based interventions, such as Welcome to Parenthood, to be quickly scaled and spread to other jurisdictions." – Dr. Karen Benzies, Associate Dean Research, Nursing; Child Health Thought Leader

translation, and the W21C Research and Innovation Centre[12] has been bringing innovation to the healthcare system for over 15 years. UCalgary's partnership with the national not-for-profit Mitacs[13] provides an invaluable opportunity for research trainees to gain industry and international research and development experience. Of particular note, **the student-led Innovation4Health's 2019 Health Hack[14]** focused on bringing skilled personnel together with healthcare professionals, caregivers and patients to find solutions for child health-related problems. **Child Health and Wellness researchers are already taking advantage of this burgeoning innovation landscape** and our strategy aims to further increase and support innovation for the benefit of children and families.

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[7] https://www.ucalgary.ca/hunter-hub/

[8] https://innovatecalgary.com/

[9] https://www.creativedestructionlab.com/locations/calgary/

[10] https://ucalgary.ca/news/ucalgary-launches-first-women-entrepreneurship-training-program?mkt_tok=eyJpIjoiTkRZMllUQXdZMkl5WVRReCIsInQiOiJKb0RvUGNOYk5sbW1iNWRnTE9EZHo0bFwvcDZJWXdxS0FudWNuNFBPeUVLQk9CdzJNdW03TXNGNkZXSkJ3QWFwYnp2a0hUU0xtTU5zMVBzOXk0b2tsYVVVJxYW5FZjlZQWNlQStBOFB3UFV4ckx4Y3A0OW1kWkhhDJpdHM1dzJFZIkifQ%3D%3D

[11] https://research.ucalgary.ca/innovation/ecosystem/life-sciences-innovation-hub

[12] https://www.w21c.org/

[13] https://research.ucalgary.ca/conduct-research/funding/apply-grants/external-grants/mitacs; https://www.mitacs.ca/en

[14] https://www.innovation4health.com/

Matching Strengths with Opportunities

With expertise spanning the entire research continuum, UCalgary is well-positioned to build on its strengths and enter a new era of maternal, child, and family research - one that harnesses the energy, intellect and resources of the entire institution. Between 2012 and 2018, 9.5% of UCalgary's total publications were authored by child health and wellness researchers across eight faculties and accounted for >10% of UCalgary citations. Interestingly, child health and wellness researchers featured in this analysis represent only 3% of UCalgary research-active faculty.[15] **Child health and wellness researchers are punching above their weight.** In-depth analysis of the keywords in UCalgary child health-focused publications since 2012 reveals key areas of strength in which UCalgary researchers publish the most and garner the largest number of citations (Figure 3). The tendency of these keywords to co-occur in highly cited publications is shown by the connections among keywords.
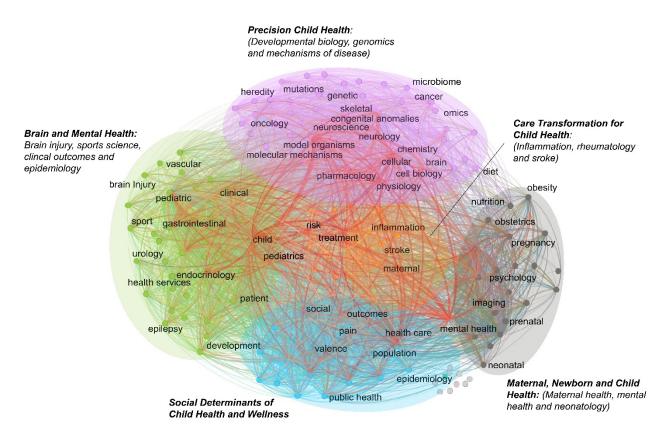

Figure 3: Child health and wellness research strength: Bibliometric analysis of >35,000 child health-focused UCalgary publications (2012-2018)

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[15] Child Health and Wellness Scan, ACHRI. May, 5, 2019. Full report available on request.

Our research strengths are also reflected in the many successful national and international Calgary-led teams that have generated major investments in child health and wellness. In the last five years, child health and wellness researchers have attracted more than $200M in external research funding, which includes community investment of $50M in matching funding, infrastructure and centre support via the Alberta Children's Hospital Foundation (ACHF) to enable this success (**Table 1**). Our researchers have been **incredibly successful leveraging philanthropic investments** to obtain competitive external funding, maximizing the impact of this research in Calgary and beyond.

Table 1: Examples of Calgary-led child health and wellness research teams and their outstanding peer-reviewed funding successes enabled by significant investments from ACHF

Investments	Title & Team	Focus & Impact
ACHF *(>$10M)* Canada Foundation for Innovation NSERC CRC Tier II *>$12M tri-council funding total*	Owerko Centre Dr. Graham *et al*	• Neurodevelopmental and child mental health • Bio-psychosocial translational approach Generating knowledge, developing effective interventions, and shaping policies and practices for the benefit of children and families affected by neurodevelopmental and child mental health disorders
ACHF *($18M)* Canada Foundation for Innovation *($12.8M)* Genome Canada/AB *($6M)* CIHR *($4.5M)* NIH *($3M)*	Precision Child Health Drs. Bernier, Childs, Cross, Hallgrimsson, Innes, Kurrasch, Parboosingh, Shutt *et al*	• Precision medicine of genetic disease in children • Rapid discovery of genetic etiology of severe childhood diseases Ending the diagnostic odyssey for kids with genetic disease, finding potential treatments, bringing hope to families
ACHF Alberta Innovates *>$23M leveraged from initial investments*	Alberta Births Common Data (ABCD includes All Our Families & Alberta Pregnancy Outcomes and Nutrition) Drs. Letourneau, Tough *et al*	• Longitudinal birth cohort with rigorous, standardized data: social determinants, service utilization, health history, and biological data • Used by >100 researchers across Canada and globally in >140 studies Informing programs, policy and practice in Alberta; sharing data with qualified investigators more broadly; partnering with community – all to maximize impact of knowledge for children and families
ACHF External research funding from multiple sources *($15M for pain research; $14.4M in 2018/19 for rehab research)*	Vi Riddell Pain & Rehabilitation Program Drs. Emery, Kirton, Noel, Trang, *et al*	• Neurological mechanisms, treatment and management of pain • Innovative rehabilitation strategies in children with perinatal stroke, neurodevelopmental conditions (e.g. cerebral palsy), physical disabilities, MSK conditions, concussion, and other chronic medical conditions (e.g. pediatric cancers) Integrating research from investigation to intervention and implementation to improve quality of life for children living with pain and children requiring rehabilitation

ACHF *($4M)* CIHR *($4.6M)* AHS *($0.5M)* Brain Canada *($0.5M)* NIH *($1M)*	Integrated Concussion Research Program (ICRP) Dr. Yeates *et al*	• Concussion prevention, diagnosis, prognosis, mechanism and rehabilitation Improve outcomes for children and youth who experience concussions
Terry Fox Research Institute (TFRI) ACHF Kids Cancer Care, Alberta Cancer Foundation *$16.4M leveraged from initial $5M from TFRI*	Precision Oncology for Young People **Drs. Chan, Narendran, Senger** *et al* with >30 pediatric cancer research and funding organizations across Canada	• Pan-Canadian study of molecular tumor profiling in young people with high-risk cancers • Utilizes infrastructure and protocols of UCalgary's Brain and Pediatric Tumour Bank 'Improving the outcomes of young people with cancer, one child at a time'[16]
ACHF *($1M)* Genome Canada *($8.5M)* CIHR *($5M)* ZonMw (Netherlands, *$3M)* The Arthritis Society *($0.75M)*	Understanding Childhood Arthritis Network (UCAN) UCAN.CAN-DU & UCAN.CURE **Drs. Benseler, Marshall, Twilt, Currie** *et al*	• Genomic precision diagnostic and therapy for >24,000 Canadian and >12,000 Dutch children with arthritis Early targeted treatments control joint inflammation and prevent lifelong disability
AIHS CIHR ACHF AHS *$2M total*	Alberta Family Integrated Care (FICare) **Drs. Benzies, Lodha, Aziz, Shah, McNeil** *et al*	• Cluster RCT and implementation of parental support intervention for parents of preterm infants in NICU Evidence-based parental support to impact overall health and developmental outcomes for preterm infants, reduce distress for parents and decrease infant hospital stay
UCalgary AB Economic Development & Trade CFI-JELF ACHF CIHR *$3.5M total*	Alberta BLOOM **Drs. Arrieta, Sycuro** *et al*	• Longitudinal study of maternal and early life microbiome in the context of preterm birth and chronic diseases such as asthma and inflammatory bowel diseases Understanding the microbiome's contribution to health and disease in order to 'empower women to make healthy choices for their bodies and their babies'[17]
ACHF *($4.6M)* CIHR CRC Tier 2 NSERC NeuroDevNet NCE SPOR SickKids Foundation *>$7M external funding*	Child and Adolescent Imaging Research (CAIR) **Drs. Bray, Harris, Lebel, MacMaster**	• Magnetic resonance-based structural, white matter, spectroscopic and functional imaging research Understanding brain development and the brain basis of learning and language difficulties, and symptoms of neurodevelopmental and child psychiatric disorders and brain injury in order to improve detection, treatment and monitoring for vulnerable children[18]

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[16] https://www.tfri.ca/our-research/research-project/precision-oncology-for-young-people-(profyle)
[17] https://albertabloom.ca/
[18] https://cumming.ucalgary.ca/research/child-adolescent-imaging/about-us

Mature research ecosystem

As we map out the next five years of discovery, we are in a superb position to build on existing strengths in child health and wellness. We now have a mature research ecosystem in which our investigators are leading larger teams on the national stage, attracting multi-centre team grants, and asking big questions to solve complex problems with transformational impacts. Partnership with stakeholders – children, families, health system partners, child and youth serving agencies and policy-makers – is essential to accelerating research and outcomes for children and families here and beyond. The cornerstone of our approach is mutual benefit and reciprocity – we are asking the critical questions that our partners want answered to address the health and wellbeing of all children, including the most vulnerable.

Partnering for broader impact: Provincial child health and wellness stakeholders

Alignment of our Child Health and Wellness strategy with those of our partners and stakeholders is critical. Many of our researchers are leaders in our university; others are leaders within Alberta Health Services (AHS) – a health care system that has the unique feature of being fully provincial in scope. Of note, AHS will soon be unified under a common clinical information system known as Connect Care, which will enhance the ability to conduct high quality clinical research for children and families.

Aligning our strategy with our major partners and child health stakeholders will enhance interdisciplinary teams and maximize our impact. Our unique strengths include: (1) a diverse, broad and passionate collective of researchers in child health and wellness; (2) a learning healthcare system with robust connections between research, clinical care and community practice; (3) a dynamic community of patients, families, community leaders, and agencies passionate about accelerating outcomes through research.

The new Centre for Child and Adolescent Mental Health, embedded in AHS, will provide a central community resource for young people to access services and novel interventions for mental health. It also promises to be Canada's most research-intensive clinical mental health facility for youth and invites young people and families to help inform research.

Several child health researchers undertake their research at the Alberta Children's Hospital (ACH). As part of its current strategic plan[19] the ACH focuses on "enthusiastically embracing education and research" along with advancing quality improvements and outcomes measurement to demonstrate excellence. As with care provided at ACH, our research addresses the full spectrum of the health needs of children and young people as defined by the Health Quality Council of Alberta: "being healthy, getting better, living with illness or disability, and end of life".[20]

We have recently forged a pan-Alberta partnership with child health research organizations who share goals and priorities. These partners include the University of Alberta's

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[19] Strategic and Operational Directions 2019-2024: Advancing Child Health Care Excellence in Calgary and Southern Alberta

[20] Alberta Quality Matrix for Health User Guide (https://www.hqca.ca/wp-content/uploads/2018/05/HQCA_User_Guide_Web.pdf)

Women's and Children's Health Research Institute (WCHRI), AHS' Maternal, Newborn Child and Youth Strategic Clinical Network (MNCY SCN), Alberta Innovates, ACHF, the Stollery Children's Hospital Foundation, PolicyWise, and the Alberta Children's Hospital Research Institute (ACHRI). This diverse collective offers us a powerhouse opportunity to have pan-Alberta impacts and outcomes (**Figure 4**).

Figure 4. A provincial group of child and maternal health stakeholders gathered in Red Deer in September 2019 to strategize around a common research agenda for children and families in Alberta.

Strong and diverse communities rally around Child Health and Wellness

Robust partnerships with our communities allow us to drive meaningful innovation for the benefit of children and families. Calgary is an entrepreneurial city; we pride ourselves on building innovation through partnership. AHS works as a learning health system focusing on health care excellence and advancing care for children and families in partnership with dedicated clinical and translational researchers within UCalgary. Our community has been generously supporting child health and wellness care providers and researchers for more than four decades though the ACHF and the University of Calgary. The University has established critically important collaborations with many community partners including United Way, CUPS, Boys and Girls Clubs, Wood's Homes, and institutions such as the City of Calgary, Calgary Board of Education, and the Calgary Catholic School District (**Figure 5**). Children and families are at the centre of all these partnerships.

Figure 5: Child Health and Wellness is surrounded by a strong community of support. **Community Townhall:** *left:* **Calgary Public Library:** *middle:* **Margaret Fullerton**, Senior Operating Officer, Alberta Children's Hospital, Alberta Health Services, **Sid Viner**, Calgary Zone Medical Director, Alberta Health Services, and **Saifa Koonar,** President and CEO, Alberta Children's Hospital Foundation: *right:* more than 140 participants and 35 community organizations passionately engaged in Child Health and Wellness discussions.

Children and families are key to accelerating outcomes

We are engaging children and families, community leaders and community organizations to guide our strategy and hold us accountable. Better lives, improved health and wellness for children and families through research, partnership, and innovation – these are the ultimate measures of our success. Importantly, partnerships allow us to identify and frame the questions that most urgently need answers to promote and improve the health and wellness of children in our community and beyond. Children and families will guide us when addressing grand challenges of child health and wellness.

*"Patients and their families are the ultimate decision-makers in their own care. Yet the system is not designed to learn from their lived experience and their knowledge is rarely valued. Patients are central to the continuum of care because they are the ones who are always there. **Their knowledge is an untapped resource that can be used improve both their own care and the system as a whole.**"*
– Child Health & Wellness Champion Charlie Fischer

Patients, community and scientists partner to shape research

UCalgary has **unique strengths and opportunities in patient-partnered research**. The Patient and Community Engagement Research (PaCER) unit[21] within the O'Brien Institute for Public Health trains patients to be researchers, and supports research teams to engage with patients. UCalgary researchers, such as Dr. Maria Santana, are implementing patient-reported outcomes and experiences within the health system and co-developing ways to ensure that patients are at the centre of care.

Child and youth-facing community agencies face the health and wellness struggles of children and families every day. Our plan is designed to facilitate partnerships with these agencies to conduct research to inform their work on the frontlines. These kinds of transformative research partnerships are demonstrated by projects such as the ***All Our Families*** (formerly All Our Babies) study led by Dr. Suzanne Tough in close partnership with Calgary Reads, the City of Calgary, United Way, and First 2000 Days (**Figure 6**). Projects such as this develop knowledge with local, national, and global impact; *All Our Families* is now **internationally recognized** for its tremendous contribution to our understanding of key developmental processes and milestones in children.

Figure 6. Decade of partnership with children & families

Child Health and the UCalgary Indigenous Strategy

Understanding our local community is also informed by the history of the land on which we reside. The **UCalgary Indigenous strategy, *ii' taa'poh'to'p*, acknowledges and pays tribute to the traditional territories of Treaty 7** on which our campus and city are built. This includes the "…Blackfoot Confederacy (comprised of the Siksika, the Piikani, and the Kainai First Nations), the Tsuut'ina First Nation, and the Stoney Nakoda (including Chiniki, Bearspaw, and

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[21] https://pacerinnovates.ca/

Wesley First Nations)."[22] The Indigenous strategy **sets us on a path to reconciliation** and recognizes our ongoing need to improve our understanding of the devastating effects of colonization on Indigenous peoples in our local context and across Canada. The Child Health and Wellness strategy supports UCalgary in its **seven commitments made in _ii' taa'poh'to'p_**. As we provide care and study child health and wellness, we must be mindful of our local history, helping to ensure that policies and practices respect Indigenous ways and create space for **full circle engagement and dialogue with Indigenous communities**.

In partnership with AHS, physicians like Dr. Janet Tapper have been able to provide equitable care under Jordan's principle[23] to Indigenous children with physical trauma. At a national level, Dr. Nicole Letourneau is collaborating with Dr. Peter Jaffe (Western University) on _Domestic Violence Risk Assessment, Risk Management and Safety Planning with Indigenous Populations_. Their research includes interviewing family, friends, and service providers of the victims of domestic homicide.[24]

"Let us move forward with promise, hope and caring for the sake of those children not yet born, seven generations into the future."
ucalgary.ca/indigenous

National evidence illuminates the challenges facing Indigenous children and families. The O'Brien Institute for Public Health's 2018 report, _Raising Canada – a report on children in Canada, their health and wellbeing_, highlights statistics from Health Canada: "Suicide rates are five to seven times higher for First Nations youth than for non-Aboriginal youth; suicide rates among Inuit youth are among the highest in the world, at 11 times the national average."[25] Injuries are also one of the top 10 threats to children's health in Canada, and the O'Brien report finds "26% of deaths amongst First Nations' children are injuries, compared to 6% of the Canadian population."[26] **This evidence reaffirms the need for our strategy to prioritize vulnerable children and families.**

Social accountability is at the heart of this plan, embedded in _ii' taa'poh'to'p_ and also woven into the _**Indigenous Health Dialogue**_, the Cumming School of Medicine's response to Truth and Reconciliation. CSM supports include an Elder-in-Residence program and emerging Indigenous Hub – valuable resources for CHW researchers and their teams, especially those engaging with Indigenous community partners.

Instilling equity, diversity and inclusion
Equity, diversity and inclusion (EDI) is foundational to the Child Health and Wellness plan. It is one of our core values. The EDI thread runs through each of our seven objectives; we have a

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[22] The University of Calgary Indigenous Strategy (https://live-ucalgary.ucalgary.ca/sites/default/files/teams/136/Indigenous%20Strategy_Publication_digital_Sep2019.pdf)
[23] https://www.canada.ca/en/indigenous-services-canada/services/jordans-principle/definition-jordans-principle-canadian-human-rights-tribunal.html
[24] http://cdhpi.ca/domestic-violence-risk-assessment-risk-management-and-safety-planning-indigenous-populations
[25] https://www.canada.ca/en/indigenous-services-canada/services/first-nations-inuit-health/health-promotion/suicide-prevention.html
[26] https://www.canada.ca/en/indigenous-services-canada/services/first-nations-inuit-health/health-promotion/keeping-safe-injury-prevention-first-nations-inuit-health-health-canada.html

plan to operationalize EDI across our strategic blueprint. EDI is a mandate across the university and AHS. Our approach to EDI is also informed by frameworks articulated by national partners – for example, Sick Kids Research Institute, and its action plan for EDI.[27]

Calgary-led research has global impact

Many UCalgary researchers are **leaders in child health and wellness on a global scale**. This is true for scholars such as Dr. Scott Patten, the *Cuthbertson-Fischer Chair in Pediatric Mental Health,* who contributes to the international body of work on the Global Burden of Disease. It is also true for Drs. Carolyn Emery, Kathryn Schneider, and Keith Yeates (*Ronald and Irene Ward Chair in Pediatric Brain Injury*), who have influenced the international consensus on sport concussion. Dr. Stephen Freedman, holder of the *ACHF Professorship in Child Health and Wellness,* has published and presented internationally his research into gastrointestinal infections – this work also informs better treatments for children in Southern Alberta.

UCalgary medical geneticists including Drs. Francois Bernier and Michael Innes diagnose genetic diseases for children at the Alberta Children's Hospital and integrate their work within international consortia such as Care4Rare[28] that strive to **end the diagnostic odysseys of children with genetic diseases around the globe**. Dr. Susa Benseler, Marinka Twilt, Deborah Marshall, and the Calgary Rheumatology team have developed precision diagnostics and treatments for patients with arthritis in Calgary while co-leading the national Understanding Childhood Arthritis Network (UCAN) team to advance precision medicine for childhood arthritis in Canada, the Netherlands, and beyond[29].

The combination of acting locally while impacting globally is also true for those engaged in global child health projects. In accordance with the UCalgary International Strategy[30], our researchers lead and contribute to global health projects in East Africa, such as the Healthy Child Uganda and MamaToto projects in Uganda and Tanzania. These efforts and many others exemplify the contributions of Child Health and Wellness researchers to the Eyes High Foundational commitment to integrate UCalgary in our local community and around the world.

A history of enduring partnership

The story of child health and wellness is a story of enduring partnership – **five decades of partnership between UCalgary, AHS, ACH, and ACHF**. Child health research in Calgary began in the Alberta Children's Hospital on Richmond Road in 1978 when ACHF funded the Behavioural Research Unit – today members of the Child and Family Health Research Unit (Paediatrics), the Owerko Centre, and the Brain and Mental Health Program at ACHRI.

Another milestone year was 1982: ACHF funded the Genetics Research Unit – now the Cumming School of Medicine's Department of Medical Genetics, and ACHRI's Precision Medicine & Disease Mechanisms Program. That same year, ACHF funded and built the

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[27] http://www.sickkids.ca/PDFs/Research/Research-EDI/80592-The%20Hospital%20for%20Sick%20Children%20EDI%20Action%20Plan%20%20-%20December%202019.pdf#page18

[28] http://care4rare.ca/

[29] https://www.ucancandu.com/

[30] https://www.ucalgary.ca/campaign/energize-campaign/student-experience/international

Kinsmen Research Centre as a home for those two research groups. In 1990, they joined forces and, in 1996, emerged as the University of Calgary's Child Health Research Centre.

In 2004, the Child Health Research Centre merged with the Genes and Development Research Group in the University Faculty of Medicine to create the **Institute for Child and Maternal Health**. Its focus: excellence in research and education in maternal, newborn and child health. Dr. James Cross, the founding director, remembers that collaboration between ACH, the university and ACHF were essential ingredients to nurturing excellence. That same year the Dean of Medicine, Dr. Grant Gall, created four additional research institutes with the goal of accelerating research and transforming care. The Calgary Health Region (now AHS) and University of Calgary were its signatory partners.

"The University of Calgary's diverse research strengths in child health – from the molecular level through to population health – have always been an enormous challenge, and a major opportunity." – Dr. James Cross, founding director, Institute for Child and Maternal Health

The new Alberta Children's Hospital, built on UCalgary's west campus, opened its doors in 2006 - the first free standing children's hospital to be built in Canada in more than 20 years. Just across the street, the Child Development Centre opened in 2007, housing the west campus University Child Care Centre, and the Owerko Centre with research on neurodevelopment and child mental health. ACHRI was formally named in 2009 with a bold new strategy aligning UCalgary's research plan and the Alberta Health Research and Innovation Strategy.

Five decades of community support helped establish: the first researchers and subspecialists in pediatrics, a dedicated children's hospital on Richmond Road, a new children's hospital on the University of Calgary's West Campus, a dedicated pediatric research institute – ACHRI – and the Owerko Centre at ACHRI.

In 2000, there were 27 full-time, and 25 part-time pediatricians in Pediatrics. In 2008, Department Head Dr. Jim Kellner began combing North America for the best and brightest. These days Pediatrics has 400 members in 24 disciplines serving the needs of children, families and community as never before.

Today, ACHRI has more than 300 members who span nine Faculties across the university. Five decades of hard work, partnership and strategic investments have led child health and wellness to this point. The history of child health and wellness maps out our unique strengths, and the undeniable opportunity we have in this next decade. Our Child Health and Wellness Strategy is designed not only to advance the goals of the University of Calgary Eyes High Strategy and the Strategic Research Plan, but also to transform outcomes for children, families and our community. We are building on a significant base of strength and an area of tremendous societal importance and impact. **We are well-positioned within the University and our community to build capacity and**

"A unique strength we have at the University of Calgary is a critical mass of clinical scientists working within the Alberta Children's Hospital and beyond. That dynamic, close-knit relationship between UCalgary and AHS offers us a stellar opportunity for transforming outcomes for children and families." – Dr. Marinka Twilt, ACHRI Scientific Director – Clinical Research

drive innovation that will have transformative impacts on the health of future generations here and beyond.

Developing the Child Health and Wellness Strategy

Years of hard work and thoughtful consultation have culminated in this strategy: from the initial proposal (Fall, 2018) to cross campus and community consultations throughout 2019, researchers, community and thought leaders have guided the development of the Child Health and Wellness strategy closely aligned with the core principles of the University of Calgary 2018-2023 Research Plan, including **Matching Strength with Opportunities**, **Increasing Research Capacity** and **Driving Innovation**. **(Figure 7).**
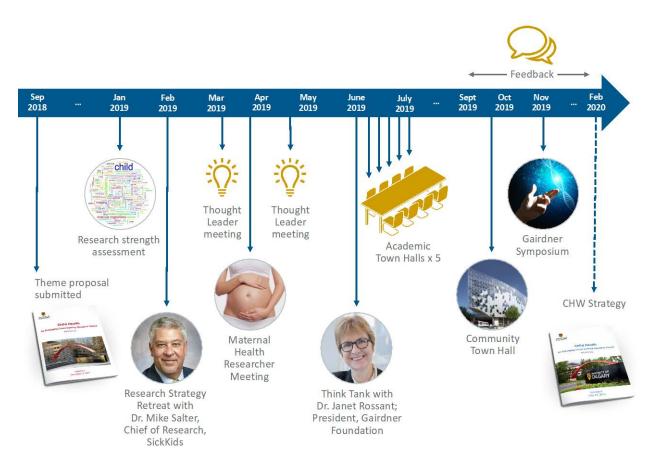

Figure 7: Roadmap for Child Health and Wellness (CHW) includes: research strengths assessments, academic and clinical thought leaders, grassroots town halls across campus and into the community, strategic advice from community leaders, as well as national child health research experts

Defining Strengths and Opportunities

Key milestones for Child Health and Wellness included **defining current areas of strength in child health and wellness**, including publications, citations and research investments (pages 9-12 above, Figure 3, Table 1) and **exploring the current capacity and gaps to address grand challenges** within the broader child health research landscape. An essential milestone: an iterative consultation and engagement process with thought leaders across campus, six cross-campus town halls, and events

"Research in children is research in life trajectories." – Dr. Janet Rossant, President of the Gairdner Foundation and keynote speaker at the 10th Anniversary Research Symposium and Celebration of ACHRI, May 2019

including research symposia and retreats. Another milestone: national leaders in child health research provided key insights for our strategy. Dr. Mike Salter, Chief of Research at SickKids Research Institute, provided valuable advice on internal strategic organization, emphasizing that we need to drive the science in child health and align ourselves with clinical and funding partners. Dr. Janet Rossant, President of the Gairdner Foundation, urged us to view child health research as life trajectory research and emphasized that many of the world's major biomedical discoveries have had the biggest impact for children.

Mobilization and Engagement through Town Halls

More than 500 researchers attended five academic town halls in June 2019 with themes based on consultations and strengths analysis. Each town hall featured short talks from child health and wellness researchers across campus (**Figure 8**), outlining existing strengths, opportunities, and challenges. Small group discussions encouraged participants to design

Figure 8. UCalgary Child Health and Wellness town halls connect experts and ignite ideas as never before

additional grand challenges and plans to address them. A community town hall in September 2019 brought together **140 attendees, including academics, clinicians, and 35 child and youth-serving community agencies to identify grand challenges in child health and wellness that could be addressed through research partnerships**. We analyzed data collected from all six town halls using qualitative thematic analysis, under the guidance and direction of Dr. Karen Benzies (Associate Dean Research, Faculty of Nursing; see **Appendix** pages 2-11). The broad child health and wellness community gathered in record numbers to collaborate on transformational plans for research (**Figure 9**).
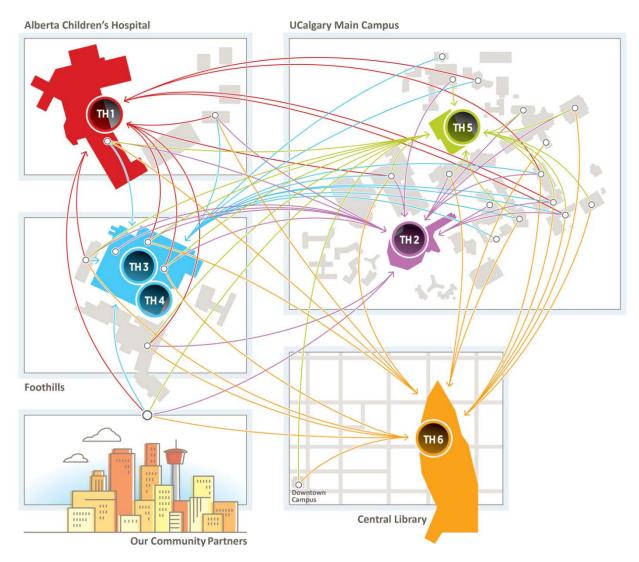
Figure 9. **640 participants attended six town halls in 2019.** Town Hall 1: *Precision Child Health*; Town Hall 2: *Brain Development, Function and Mental Health*; Town Hall 3: *Maternal, Newborn and Child Health*; Town Hall 4: *Care Transformation for Child Health*; Town Hall 5: *Big Data and Social Determinants of Child Health and Wellness;* Town Hall 6: *Child Health and Wellness Community Town Hall*. Researchers, leaders and community partners across disciplines came together to share transformative plans for collaborative research.

Town hall attendees submitted more than 60 grand challenges on a diverse range of topics requiring researchers to join forces across disciplines. **Appendix Table 1** shows the top themes that emerged within each town hall, along with underlying resources and mechanisms needed to address these grand challenges.

The breadth of ideas derived from the Child Health and Wellness town halls are a testament to the creativity and passion of our Calgary Child Health and Wellness community and will fuel the research agenda for the Child Health and Wellness Strategy. There is more work to do as we further explore these grand challenges. Our response to these grand challenges is based on strengths and opportunities; it requires us to mobilize and equip our Child Health and Wellness community to address the pressing needs of children and families through research.

Restructuring ACHRI to support Child Health and Wellness

To better support Child Health and Wellness within focused areas of strength and opportunity, we have re-structured ACHRI (see Objective 2 below and **Figure 10**) to support this accelerated, outcome-focused agenda. The new ACHRI structure was presented to UCalgary leaders, key Child Health and Wellness partners, and ACHRI advisory committees. It was also reviewed and approved at the 2019 Annual General Meeting of ACHRI at the research retreat in Banff, attended by researchers from nine Faculties across UCalgary (see **Appendix** page 12 for more discussion on the relationship between ACHRI and the Child Health and Wellness strategy).

Where Strength meets Opportunity

Having gathered our strengths, identified the national and international research landscape, and heard superb advice from national experts, we are now ready to tackle grand challenges in Child Health and Wellness. Our community of Child Health and Wellness researchers is poised to take our priority areas to the next level. With children, families, and our community at the heart of our work, we can generate transformative discoveries and outcomes for children and families.[31] We know that **focused Child Health and Wellness research collectives are greater than the sum of their parts.**
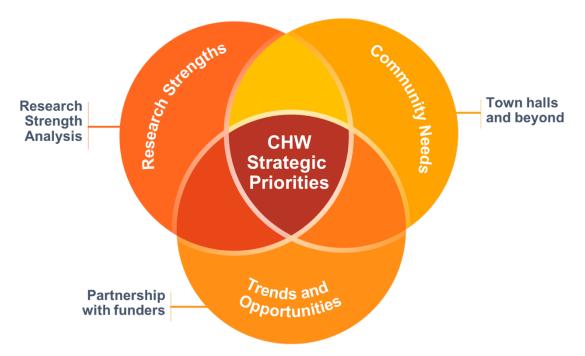
Figure 10: The UCalgary "strategic sweet spot" for success in Child Health and Wellness lies at the intersection of strengths, needs, trends and opportunities.

The strategic priorities of the Child Health and Wellness strategy are defined at the intersection of research strengths, community needs, and the broader context of trends and opportunities (**Figure 10**; see **Appendix** pages 13-16 for a broad scan of trends that impact child health and wellness). These priorities include: **Care Transformation for Children**; **Child Brain & Mental Health**; **Child Health Data Science**; **Childhood Cancer and Blood Disorders**; **Healthy Children, Families & Communities**; **Maternal & Child Health**; and **Precision Medicine & Disease Mechanisms**.

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[31] Fox, Paine & Sauterey. (2016) Citations increase with manuscript length, author number, and references cited in ecology journals. *Ecology and Evolution* **6**: 7717-7726.

Kliegl, R., & Bates, D. (2010) International collaboration in psychology is on the rise. *Scientometrics*, **87**: 149–158

Katz & Hicks. (1997) How much is a collaboration worth? A calibrated bibliometric model. *Scientometrics*, **40**: 541–554.

The Child Health and Wellness Strategy

Our Child Health and Wellness strategy addresses all the major tenets of UCalgary's 2018-2023 Research Plan.[32] Our blueprint is designed to **match strengths with opportunities**, **increase research capacity** and **drive innovation** to address grand challenges in child health and wellness through seven distinct, but related Objectives (**Figure 11**). The Child Health and Wellness strategy will empower partnerships that drive deliberate and strategic knowledge creation to accelerate child health and wellness. It embraces all Child Health and Wellness researchers, irrespective of their faculty, department or institute. It is facilitated by the existing infrastructure of the Alberta Children's Hospital Research Institute – the only research institute in Southern Alberta focused on the early years of life.

Figure 11: Children & Families are the starting point for the Child Health and Wellness Strategy, which includes seven major objectives: (1) **Research Excellence** - building culture and community; (2) **Research Programs** - driving science through strength-based foci; (3) **Cores and Infrastructures** - enabling cutting-edge research; (4) **Equip the Next Generation** - providing trainees and young researchers with knowledge, skills and tools to drive child health and wellness; (5) **Community Partnerships** - partnering with leaders and community to address needs in child health and wellness through research; (6) **International Partnerships and Leadership** - investing in Child Health and Wellness researchers for international impact; (7) **Sustainable Framework** - building a durable framework to sustain Child Health and Wellness research. **Children and Families** are at the heart of our strategy.

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[32] https://research.ucalgary.ca/research/research-plan

Values and Goals

Our strategy is anchored in the following <u>values</u>:

- **Excellence** – accelerating the potential of our child health researchers, paving a superhighway to 'create the future of child health'
- **Integrity** – including accountability and transparency - demonstrated by our leaders, researchers, staff, and partners
- **Child and Family Centred** – partnering with, and for, our children and families
- **Collaboration** – across disciplines and with our community. Working together to ensure our research efforts have lasting effects through co-creation of knowledge with children, families, and those who can apply the knowledge.
- **Innovativeness** – including social innovation and entrepreneurship. The communities we serve within Calgary and Alberta are known for their unique entrepreneurial spirit.
- **Equity, diversity and inclusion** – our diverse researchers, children, families and communities deserve equal access to opportunities.

Our five-year strategy is designed to progress towards four high-level 'enabling' <u>goals</u>.

We will enable our community of Child Health and Wellness researchers to:

1. *Conduct **high quality, internationally-recognized** child health and wellness research for **children and families***

2. *Become national and international leaders in **innovative and transformative** research from bench to bedside to backyard and back*

3. *Advance national leadership in **community-partnered, child and family-centred** health and wellness research*

4. *Lead **evidence creation, evidence-informed health promotion and policy development** to benefit children and their families in Alberta and beyond*

Our goals will be enabled through **seven major objectives**, outlined in the following pages, each of which contain specific and actionable aims to be met over the next five years. As with any guiding strategy, the process of accomplishing our objectives will necessarily require refinement and adjustment as we move forward together as Child Health and Wellness Scholars and in partnership with stakeholders and champions of Child Health and Wellness.

Objective 1: Build a Culture and Community of Research Excellence

There is no set recipe for creating a culture and community of research excellence, but people are the key ingredients. Our people include children who are looking for a healthy future as well as those who invest their lives and careers to create new knowledge, advance science and improve health outcomes for these children and their families.

We are enabling a cross-disciplinary group of researchers through a visionary plan and generous investments by our community. This context attracts **members into a dynamic community of Child Health and Wellness researchers and scholars**. While access to exclusive funding opportunities represents a tangible benefit to membership, funding opportunities alone have no inherent 'cultural' value. However, the ways in which funding opportunities are socialized, distributed, and invested, and the criteria on which they are evaluated will foster a vibrant and collaborative research culture within our community. Our culture will be evident through our cross-disciplinary knowledge-sharing opportunities, communication and support for individuals and teams to advance and thrive within the academic context, the broader community and beyond.

Aim 1a: Invest in all stages of research training and careers (trainees to senior investigators to community collaborators), *all types of research activities* (discovery to translation to impact), *and in all phases of research* (pilot studies to publication to policy to practice). Funding opportunities made available through investment in this strategy will be **equitable** across the academy and will enable **inclusion** of key community collaborators and participants with **diverse** perspectives.

Aim 1b: Ensure that child health and wellness researchers across the entire UCalgary campus can become Child Health and Wellness Scholars so that they can benefit from

funding opportunities made available through the Child Health and Wellness strategy. Other benefits of membership are less tangible but are arguably more important for promoting strong cultural cohesiveness. The importance of **networking** and **sharing information and ideas** through formal and informal interactions and events is essential. Networking is the mechanism through which many academic positions are secured, particularly for trainees. Sharing information and ideas leads to productive collaboration and refined methods and hypotheses, all of which work to produce more rigorous and impactful results. Membership in a robust child health research community also provides opportunities for **professional development** (e.g. leadership and grant-writing), **mentorship** (e.g. for trainees and early career investigators), and child health-related **research supports**. Membership criteria for Child Health and Wellness Scholars will not require a strong academic track record, just a willingness and potential to contribute as

*As the facilitator of the cross-cutting Child Health and Wellness strategy, **ACHRI commits to welcoming all child health and wellness contributors including** researchers, educators, **quality improvement professionals, care providers and community leaders as Child Health and Wellness Scholars**, regardless of discipline, training or faculty. This commitment does not preclude researchers from membership in other institutes or centres. All ACHRI members are now considered full members and will have equal opportunity to access resources through the Child Health and Wellness Strategy.*

part of a team. Child Health and Wellness Scholars who hold a UCalgary faculty appointment are also considered Child Health and Wellness Researchers.

Aim 1c: Host, coordinate and support regular seminars, workshops, and events that bring Child Health and Wellness Scholars together, across disciplines and campuses, across career stages, and across areas of research interest. These include, but are not limited to:

- Annual Retreat (open to all Child Health and Wellness researchers, staff and trainees)
- Annual summer research symposium (featuring undergraduate, graduate and faculty posters and presentations)
- External Child Health and Wellness Research Program seminar series*
- Internal seminar series and journal clubs, including research-in-progress seminars*
- National or international meetings to advance and build collaborative research teams focused on Child Health and Wellness priorities
- Focused training workshops to support common needs amongst smaller groups of Child Health and Wellness Scholars (e.g. support for entrepreneurial STEM women to attend the 'From Lab 2 Fulfillment' workshop offered by 2016 Peak Scholar in Entrepreneurship, Innovation & Knowledge Engagement and 2018 ASTech Awardee, Dr. Orly Yadid Pecht, Professor in the Schulich School of Engineering)

  * as *determined by the needs of the seven research programs, Strategy 2 below*

Aim 1d: Provide dedicated Child Health and Wellness research support services in partnership with other UCalgary departments and units. These include, but are not limited to:

- Internal peer review coordination (in partnership with Research Services Office (RSO))
- Team grant development support (in partnership with RSO and Cumming School of Medicine's Office of the Associate Dean Research, and Associate Deans Research across campus)
- Navigation and advice for ethics applications
- HR process support for research staff and trainees
- Project set-up and budget management
- Transparent process and support for engaging with the Alberta Children's Hospital Foundation (ACHF), a partner that inspires community investment in child health and wellness research at UCalgary

Aim 1e: Provide mentorship support for early career Child Health and Wellness researchers. This requires close collaboration with departments to ensure that members have appropriate career and specialty area mentors. Specifically, on behalf of the Child Health and Wellness strategy, ACHRI commits to coordinating detailed 2- and 5-year reviews for new faculty members, in partnership with each member's primary department.

ACHRI meets face-to-face with small groups of new members to highlight programs and support offered by ACHRI and the University of Calgary. This enables new members to have a personal connection with the Institute and each other. This is especially helpful for off-site clinical and community-embedded researchers.

Aim 1f: Create an internal communications strategy to foster community and amplify information sharing. The development of the Child Health and Wellness strategy in 2019 took a grassroots approach, including town halls to engage our passionate University community and beyond. The newly established, virtual, and cross-cutting network of Child Health and Wellness Scholars is enabled by strong communications and partnership between ACHRI and the University. Our communication strategy integrates ongoing community-wide electronic updates, focussed information exchanges around specific opportunities, and an annual gathering of the diverse membership of the newly established family of Child Health and Wellness Scholars.

Objective 2: Create Child Health and Wellness Research Programs at the intersection of strength, need, and opportunity.

The Child Health and Wellness strategic framework – where strengths, needs and opportunity intersect – will guide resource allocation and the investment of time and energy on new initiatives. To build these areas of focus into the fabric of the strategy, we are establishing each as a research program with a defined membership and a program director. Program directors will drive the research agenda within their program and ensure that their program contributes to broader initiatives within the Child Health and Wellness strategy as well as the larger Child Health and Wellness community, locally and globally.

Each program will develop or coordinate team-based grant proposals to address the major goals of the program (Grand Challenge Program Grants). By design, the programs are sufficiently focused to allow such projects to emerge, but broad enough to stimulate interdisciplinary collaboration. Every Child Health and Wellness researcher will choose one program as their primary affiliation. Researchers are likely to contribute to more than one program but their first choice program will serve as their research home base.

The following research programs, which have also be adopted as ACHRI's research programs, represent the current alignment of strength, need and opportunity in Child Health and Wellness:

1. **Healthy Children, Families, and Communities:** Healthy children and families are the foundation of a healthy society. The goal of the Healthy Children, Families, and Communities program is to bring together and support scientists engaged in research to improve the health and well-being of Canadian children, youth, and families. Canada currently ranks 25th out of 41 OECD countries for children's well-being. Major threats to Canada's children include: intentional (e.g. child abuse, suicide) and unintentional injuries, mental health, poverty, infant mortality, obesity, inactivity, food insecurity, vaccine preventable illnesses, discrimination, and bullying. Policies to address these threats, and prevention strategies focused on the social determinants of health will drive program research activities. This work holds the greatest promise to improve child and family health and well-being in Canada and beyond.

2. **Care Transformation:** This program will generate new knowledge and translate evidence into action within our health system to improve outcomes for children and families. To achieve these goals, the program will build and empower multidisciplinary and multi-sectoral collaborations within hospital, clinic and community health program settings. Its members contribute to the growth of an evolving health care system that engages children, families and health care practitioners; one in which the creation of knowledge is embedded in care and connected to advancing evidence-based improvements in health care delivery and health policy.

   "Our learning health system and dynamic partnership with Alberta Health Services combined with our research strengths make us unique in Canada to transform care for our children. What a brilliant opportunity!" – Dr. Susa Benseler, ACHRI Director

3. **Child Health Data Science:** This program will support the development and implementation of cutting-edge data science methods, including advanced big data

machine learning and statistical methods, and foster high-end computational resources to enable precision medicine for children. The program aims to collect, analyze, and integrate data from multiple sources to improve prevention, diagnosis, and treatment of pediatric diseases in direct collaboration with clinicians. It will also enable innovative research to address gaps in knowledge related to pediatric diseases.

4. **Precision Medicine and Disease Mechanisms:** This program applies advanced genetic, epigenetic, genomic, and other high-throughput technologies to decipher the molecular and cellular basis of normal development and childhood genetic disorders. Building on the diverse expertise of its members, its overarching goal is to build a centre of excellence to apply precision medicine to genetic diseases of childhood. This is achieved through cutting edge research using model organisms, advanced cell culture methods, high-level imaging, and bioinformatics. This program has several intercalated initiatives, notably KidOmics and Model Organism Research for Pediatric Health (MORPH), that use fundamental basic research to advance progress across the childhood disease spectrum by rapid translation of laboratory findings into clinical care.

5. **Maternal and Child Health:** This program will generate new knowledge and translate findings into improved mental and physical outcomes for mothers and their children at all stages of development. Its members conduct interdisciplinary research that spans fundamental research into fetal and placental development; understanding how events during pregnancy impact women and children's health in the short- and long-term; and how the health care system and communities can be strengthened to promote improved health and well-being of mothers and children in Canada and abroad.

The World Health Organization reports preterm birth complications as one of the five leading causes of death in children under the age of five. Did you know that, at 8.7%, Alberta has one of the highest rate of preterm birth in Canada?

6. **Child Brain and Mental Health:** This program's goal is to generate new knowledge and translate it into improved physical and mental health outcomes for children and youth. Members study brain development, neurodevelopmental and neurological disorders, brain injury, cognition, behaviour, and mental health. This is an interdisciplinary group with research spanning the full range of translation from bench to backyard, including cutting-edge molecular, genetic, neuroimaging, assessment and intervention techniques, in both model organisms and humans.

7. **Childhood Cancer and Blood Disorders:** This program is a collaborative initiative of ACHRI and the Arnie Charbonneau Cancer Institute. Its overarching goals are to advance understanding of the biology and sequelae of childhood cancers and blood disorders and to use existing and new knowledge to improve their diagnosis and treatment. Members include a highly integrated and interdisciplinary team of clinical investigators and scientists all contributing to one or more of the following three research areas: (1) understanding the cellular and molecular basis for childhood cancer initiation and progression; (2) innovating and testing new therapeutic approaches for the treatment of childhood cancer and blood disorders; (3) increasing the availability of well characterized patient-derived samples and experimental models of childhood cancer and blood disorders.

How do the seven programs interact with previously established, large-scale initiatives in Child Health and Wellness?

ACHRI, through its partnership with the Alberta Children's Hospital Foundation, supports ongoing research initiatives and centres with considerable collective impacts in their respective research areas. Particularly, the Owerko Centre and the Vi Riddell Centre for Pain and Rehabilitation have brought together focused, multidisciplinary teams to tackle neurodevelopmental disorders and youth mental health, as well as childhood pain and rehabilitation, respectively. Both centres conduct research spanning from basic mechanisms through to policy, integrate with clinical programs, and were established through transformative gifts from our generous donor community.

All researchers within an existing centre or research initiative will join one or more of the seven Child Health and Wellness programs while still residing within their existing centre. As an example, many researchers who are part of the Owerko Centre will also find value as members of the Child Brain and Mental Health Program. **Our intent is that all Child Health and Wellness researchers will find a primary home within one of our seven newly established programs while also remaining free to contribute to these existing initiatives and centres, as well as to the activities of other research programs.**

Aim 2a: Drive transformative research within each program via Grand Challenge Program Grants. [33]

Increasingly, the gaps in knowledge of greatest importance to society are large and complex, requiring the expertise of multiple disciplines. Such teams can be difficult to build and sustain, particularly without enabling organization, infrastructure, or investment. National and international competitions that fund research at this scale tend to award grants only to teams with established track records and a history of demonstrated success. **We need to support research teams as they build momentum to become successful on a larger scale or we risk widening the gap.** To address this need, we propose a new funding stream through the Child Health and Wellness strategy in partnership with the ACHF. This stream will serve to seed and develop integrated research teams focused on addressing specific grand challenges to transform child health and wellness. Grand challenge teams will operate under a common set of principles:

- Proposals developed by these teams will articulate a large-scale grand challenge (or a set of closely related grand challenges) that requires a **unified collective of multidisciplinary researchers** across UCalgary Faculties to achieve success
- Team proposals will **align with research priorities** of the Child Health and Wellness strategy – that is, they will tap into existing research strengths, address stated needs of the community (locally or broadly), and build on identified trends relevant to child health and wellness
- They will be evaluated based on criteria that include **impact beyond the academy**, similar to criteria used in program evaluation, but more specific to the research outputs and outcomes of the Grand Challenge Program Grant.

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[33] See **Appendix**, page 17, for additional details on the Grand Challenge Program Grants

Objective 3: Create and support research core facilities and platforms to enhance productivity and impact

Advanced research programs require advanced research infrastructure. A well-rounded suite of research infrastructure allows our researchers to "gain traction toward excellence"[34]. To support our seven Research Programs, we will create and build on a suite of cores and platforms. These horizontally-integrated platforms will support and enhance multiple aspects of our seven Research Programs. In principle, they should target areas of particular need for the Child Health and Wellness research community and gaps in the existing research infrastructure at UCalgary. By definition, **a research core or platform will serve more than one researcher**; it will also serve to increase research capacity through training opportunities, whether for students, staff, faculty, or external collaborators.

As we look to develop and expand on cores and platforms, our goal will be to meet the needs of our Child Health and Wellness researchers, regardless of Faculty or physical location. Currently, many of the cores and platforms supported by ACHRI exist within the Cumming School of Medicine and the Alberta Children's Hospital by virtue of the associations of the researchers who have developed and primarily use these cores.

Cores and platforms are not all equal; they differ in the initial and ongoing investment required, level of complexity in operation and management, and in the breadth of researchers who benefit. Hockberger *et al*[35] provide insight into the requirements for successful management of core facilities within a complex academic setting. We will utilize their learnings and framework to ensure sustainability and flexibility of core resources to support high quality child health and wellness research as we work toward the aims outlined below.

Aim 3a: Encourage researchers to budget for use of local core facilities and platforms.
One of the major mechanisms by which we will support our core facilities and resources is via funding built into the Child Health and Wellness Grand Challenge Program Grants. Furthermore, we will promote use of core facilities through advertising available resources to the Child Health and Wellness research community, externally (where appropriate), and by encouraging all Child Health and Wellness researchers to include a budget for use of core facilities in external grant applications.

Aim 3b: Work with other Faculties/institutes/departments to harmonize cost-recovery and access and use policies.
Within the Cumming School of Medicine in particular, a number of core facilities offer overlapping equipment and services to researchers (e.g. several microscopy suites). On behalf of the Child Health and Wellness strategy, ACHRI will work with other institutes (e.g. HBI, Snyder, Charbonneau, McCaig) to advocate for combining units and/or budgets to enable cross-institute access to researchers to enhance sustainability and increase efficiency. We will also work with directors and leaders of core facilities and platforms to ensure they are in compliance with UCalgary policies and standards.

Aim 3c: Work with core facility and platform directors and faculty leaders to set and review sustainability targets.
While self-sustainability remains the gold standard for any core facility, this is not the reality for most core facilities. Most core facilities do well to achieve 50% cost recovery. We will work with

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[34] CHW Scholar Dr. Wendy Dean
[35] "Building a Sustainable Portfolio of Core Facilities: a Case Study" *J Biomolecular Techniques* (2018) 29:79-92

directors and leaders of core facilities and platforms to decide on measurable and attainable annual targets for each facility that allow benchmarking against similar facilities, here and elsewhere. If associated metrics are not currently measured, we will support collection of these metrics.

Aim 3d: Determine and pursue licensing and commercialization opportunities with core facility and platform directors in partnership with UCalgary innovation ventures.

Certain core facilities and platforms will achieve some measure of sustainability through licensing and commercialization of products, processes, and/or methods. We will encourage all core facilities and platforms to maintain an asset list that can be shared with Innovate Calgary. Core facility and platform directors will be encouraged to pursue entrepreneurial training and networking opportunities through existing UCalgary innovation ventures.

Aim 3e: Consult with membership to assess need for new facilities, equipment, infrastructure and resources to benefit teams.

As part of our cross-cutting mandate to increase research capacity and drive innovation, we will regularly review and recommend new platforms that are needed to address grand challenges through the Grand Challenge Program Grants. Child health researchers have an excellent track record in obtaining large-scale funding for infrastructure. We will act on needs for new infrastructure expressed by Child Health and Wellness researchers by targeting large-scale funding opportunities such as the Canada Foundation for Innovation and Western Economic Diversification Canada.

Below is a non-exhaustive list of core facilities and platforms (existing and in development) that are needed to support Child Health and Wellness research. Items in bold represent facilities and platforms with specific Child Health and Wellness affiliations. Several of these core facilities and platforms exist in limited capacity will require investments in order to meet the growing needs of Child Health and Wellness research teams as they work to address prioritized grand challenges. Furthermore, we are cognisant of the potential need for core facilities and platforms to support research outside of the Cumming School of Medicine and will work with researchers in other Faculties to ensure that appropriate resources are accessible to Child Health and Wellness Scholars, regardless of Faculty.

- Animal facilities (i.e. Health Sciences Animal Resource Centre, Clara Christie Centre for Mouse Genomics, Experimental Imaging Centre)
- **Biobanks (e.g. Kids Cancer, Neurocritical Care)**
- Bioinformatics resources outside the Centre for Health Genomics and Informatics (e.g. Veterinary Medicine, Snyder Institute)
- **Biostatistics and methods support for big data management and analysis** (through partnership with UCalgary Biostatistics Centre - *in development*)
- **Cell culture and organoid platforms** (*in development*)
- **Centre for Health Genomics and Informatics (CHGI)**
- Clinical informatics and administrative data access support (through the Centre for Health Informatics and in partnership with **MyChild^Alberta and AHS data wayfinder service**)
- **Child and Adolescent Imaging Research (CAIR) program at ACH**
- Hunter Hub for Entrepreneurial Thinking
- International Microbiome Centre
- Knowledge Translation support (*in development* and in partnership with AHS Strategic Clinical Networks and Alberta's Strategy for Patient-Oriented Research SUPPORT Unit)

- Life Sciences Innovation Hub (in University Research Park)
- **MicroCT, Morphometrics and High Throughput Phenotyping**
- **Multiplexed Ion Beam Imaging (MIBI)**
- Omics platforms (e.g. **10x Genomics, Nanostring**, mass spectrometry for proteomics and metabolomics)
- **Optical imaging (microscopy suite)**
- Patient and Community Engagement Researcher Program
- **Pediatric clinical trial support** (*in development* in partnership with the Clinical, Health Services and Population Health Research Platform, the Alberta Children's Hospital, and the Department of Paediatrics)
- **Physiological monitoring equipment (e.g. mouse ECG)**
- **Research support** (pre- and post-award grant development and review, ethics and project set-up support; in partnership with Associate Deans Research and the Department of Paediatrics)

Objective 4: Equip and Foster the Next Generation of Child Health Researchers

Cross cutting training opportunities for trainees at all levels are critically important to develop a world class Child Health and Wellness program. The CSM institutes have developed superb training platforms; we will partner to integrate these efforts to build an innovative training environment with a focus on child health. Through generous, long-standing support from the ACHF, ACHRI's Research Training Platform – ACHRI Strategic Training and Education Program (STEP) has been investing $900K annually in training the next generation of child health researchers. The STEP framework will be foundational to partnered training opportunities and funding for Child Health and Wellness trainees.

Building on the success of ACHRI STEP, the Child Health and Wellness training platform will provide competitive trainee funding awards, including graduate scholarships, postdoctoral fellowships, clinical research fellowships, undergraduate summer studentships, as well as travel awards and trainee small research grants. This is particularly important since funding envelopes for trainees are, at present, in decline: Alberta Innovates has terminated its major trainee funding program, which historically funded a third of child health research trainees and enabled us to build capacity; furthermore, local UCalgary publication awards, which supported trainee efforts to publish in open access journals, have also been declining, thereby limiting the potential impact of their research. An important goal within this objective is to enable trainees to publish and mobilize knowledge. Recognizing these changes in the trainee environment, we commit to making these opportunities available to our trainees.

The Child Health and Wellness training program will engage multiple partners across the University and beyond to provide training activities, such as workshops and events, to build competencies required to thrive in an increasingly complex and competitive research environment. These competencies will position Child Health and Wellness trainees to succeed in a challenging job market upon completion of their training. **Investment in our trainees ensures the future of child health and wellness research**.

Goals for the Child Health and Wellness trainee program:

Increase Research Capacity: Build and increase research capacity to support the Child Health and Wellness strategy, focusing on areas of strengths and priorities. This involves sustaining and supporting trainee excellence as well as creating new opportunities for Child Health and Wellness trainees.

Ensure Excellence in Training: Provide high quality education and training for students, fellows, and Child Health and Wellness research programs, which includes scientific knowledge, technical skills, transferable skills, professional development, and career planning.

Foster Community: Build a strong community of Child Health and Wellness scholars and trainees, and encourage interdisciplinary training and research opportunities; knowledge translation and mobilization; opportunities for outreach and collaboration among teams participating in the Child Health and Wellness initiative.

In keeping with our principles of building excellence and increasing research capacity, we propose the following aims to achieve our goals:

Aim 4a: Increase research and training capacity within Child Health and Wellness research priority areas. This aim includes several tactics**:**

i) Establish trainee recruitment programs in partnership with existing or emerging UCalgary recruitment initiatives: Child Health and Wellness trainee recruitment should be aligned with the UCalgary academic recruitment process to ensure the highest level of efficiency. Partnerships with existing UCalgary programs such as the Eyes High recruitment program will provide opportunities to access trainee talent outside of UCalgary and recruit excellent trainees for Child Health and Wellness research initiatives. Additionally, we will work with Graduate Science Education in the Cumming School of Medicine and other Faculties to explore creating areas of specific focus within existing graduate programs to foster Child Health and Wellness research. Recruitment and trainee placement will focus on interdisciplinarity, bridging gaps between basic, clinical and social sciences, and incorporating strong knowledge translation components throughout.

ii) Provide experiential learning opportunities to trainees: The Child Health and Wellness trainee platform will support development of strong, collaborative teams through existing and new partner links to offer opportunities for experiential learning. We will develop internships in-house and with industry and community partners. This will allow us to build up our own experts and retain them in staff/ service positions, providing stepping-stones to advance trainee careers. These internships can be service-based (e.g. biostatistical support), research support-based (e.g. writing grants/ IPR), or technical internships (e.g. genomics and other omics, advanced imaging, bioinformatics, data science). Partnered with the University of Calgary Biostatistics Centre (UCBC), we will build capacity around biostatistical and research support, and offer internships to trainees. Links with partners outside of UCalgary (industry, community agencies, governments and NGOs) will allow our trainees to apply their knowledge and skills in professional settings outside of academia.

Currently, training placements are available through Mitacs, My GradSkills, Career Services and other local UCalgary programs (e.g. partnership with IBM). We will build on these partnerships and establish child health-specific positions.

iii) Increase capacity via stipend/ salary support: Funding opportunities for graduate and postdoctoral trainees are becoming increasingly competitive. There are fewer funding opportunities available, which is compounded by institutional constraints (e.g. requirement for guaranteed stipend support) around trainee recruitment. By providing competitive funding support to trainees, we not only increase training capacity in child health research, but we also increase the quality of trainees and enable allocation of competitively-acquired grant funding. Importantly, Child Health and Wellness stipends enable trainees to be more competitive for external funding awards in the future.

iv) Increase capacity through external opportunities for program-specific or cross-cutting training grants (e.g. NSERC CREATE): These external programs help us to increase capacity through additional funding for trainee salaries. We will work with members to apply for dedicated training support grants to meet needs around capacity building. We will work with program directors to build capacity within each program and offer specific training opportunities to meet the needs of Child Health and Wellness researchers. This will promote building excellence across programs.

Aim 4b: Expand the current portfolio of ACHRI STEP to address needs of students and fellows. Provide value-added training to ensure our trainees are equipped with critical skills and competencies to succeed in both academic and non-academic careers. Core competencies include generation and application of scientific knowledge, technical skills, transferable skills, professional development, and career planning.

CSM has identified the following critical competencies, which are applicable to trainees in all Faculties: **generation of scientific knowledge**, **teaching and mentorship ability**, **collaboration**, **communication**, and **leadership and management skills**. ACHRI STEP will help Child Health and Wellness trainees to foster additional competencies – such as child-health-specific training, entrepreneurial training and other transferable skills – to ensure that they can succeed professionally, regardless of their career path:

a. Child Health and Wellness-focused workshops, including through partnership with the Canadian Child Health Clinician Scientist Program (CCHCSP)
b. Designated seminar series, journal clubs, research in progress (multidisciplinary and program-specific)
c. Mentorship program

We will offer value-added programs to help trainees develop competencies to be competitive in and outside academia. We work closely with the Faculty of Graduate Studies, other Faculties, institutes, units and programs that support trainees to enhance the training experience for students and fellows in Child Health and Wellness.

Aim 4c: Fund excellence. We will create competitive award programs that will allow us to secure the best trainees and give our existing trainees a boost for attracting external funding. We will explore partnerships to leverage stipend/salary support, through programs such as CREATE grants, Clinical Research fellowships and the Canadian Child Health Clinician Scientist Program (CCHCSP). These activities will allow us to increase the level of scholarship of Child Health and Wellness trainees and ensure their future success.

Aim 4d: Develop and support training opportunities for faculty (especially junior faculty). We will create Child Health and Wellness training and career advancement opportunities in partnership with Faculties, departments, and programs such as CCHCSP. We will also promote designated workshops for specific subgroups such as mid-career researchers and health care professionals. Some of these training opportunities will involve entrepreneurial training workshops and courses, offered in partnership with UCalgary innovation ventures. Modified project-focused curricula will be offered to enhance the skillsets of clinical Child Health and Wellness researchers.

Objective 5: Foster partnerships with children, families, and communities to drive research

Child and youth serving agencies and community practitioners are on the frontlines supporting children and families. Their professional and lived experiences offer us invaluable insights into the most serious problems facing children today. **When we partner to co-create research we design questions targeted to the needs and strengths of our children and families.**

Co-designing research with children, families, community partners, and others, such as the Government of Alberta and the Public Health Agency of Canada, ensures we ask research questions that lead to new knowledge that is **relevant and implementable**. **Our community partners can rapidly mobilize that knowledge** and share it across networks they have been building and nurturing for decades. Whether we work in the Mosaic Primary Care Network, a laboratory in the Cumming School of Medicine, a vaccine clinic at the Alberta Children's Hospital, an after-school program at Boys & Girls Clubs, or a school board, we all agree evidence-based prevention and practice will **accelerate outcomes.**

Partnering also makes us provincially and nationally competitive. Funding agencies and community donors expect researchers to engage meaningfully with children, families, health system partners and community partners as never before. Knowledge translation is now integrated into grant applications – not simply as an add-on.

When we build community and child and family engagement into research plans, we increase our ability to attract provincial and national funding.

Alberta Innovates' Partnership for Research and Innovation in the Health System (PRIHS) 6 competition calls on researchers to *"Generate the evidence needed to identify and accelerate the spread and/or scale of evidence- based solutions that close care gaps to foster more efficient and/or effective use of health care resources."*[36]

"From CIHR's perspective, accountability from the federal and provincial governments, as well as the public, makes it increasingly important to demonstrate the benefits of the investment of taxpayer dollars in health research by moving research into policy, programs and practice." https://cihr-irsc.gc.ca/e/45321.html#a2

Our community-engaged research will integrate with local, provincial and national plans. Building on a rich history of engagement at UCalgary, the Child Health and Wellness initiative is deeply invested in engaging our partners. Community engagement, as defined within this strategy, establishes interactions between a researcher, a team, children and families and community partners for a research project, program or process.

"The engagement may take many forms including review and approval from formal leadership to conduct research in the community, joint planning with a responsible agency, commitment to a partnership formalized in a research agreement, or dialogue with an advisory group expert in the customs governing the knowledge being sought. The engagement may range from

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[36] https://albertainnovates.ca/wp-content/uploads/2020/01/PRIHS-6-Program-Guide.pdf

information sharing to active participation and collaboration, to empowerment and shared leadership of the research project."[37]

Our work aligns with this Tri-Council Policy Statement, with the approach of the University's Indigenous strategy, *ii'taa'poh'to'p,* as well as the Cumming School of Medicine's response to Truth and Reconciliation, the *Indigenous Health Dialogue.* Expanding our portfolio of community-partnered Child Health and Wellness research allows us to walk the path of reconciliation: mindful and respectful of our local history, working to ensure that policies and practices respect Indigenous ways, and creating space for full circle engagement and dialogue with Indigenous communities*.*

Child Health and Wellness will align with UCalgary and AHS engagement to accelerate our impact. UCalgary is one of 16 post-secondary institutions participating in a national pilot to shape a Canadian framework in community engagement – guided by the Carnegie Foundation's Community Engagement Classification®. The Carnegie Foundation defines Community Engagement as the collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the **mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity.[38]**

These important principles chart a course for the Child Health and Wellness strategy, allowing us to leverage and contribute to UCalgary's national leadership in this arena. The **University of Calgary 2018 – 2023 Research Plan** also provides a guidepost for the Child Health and Wellness, emphasizing partnership with our community to **inform and empower our knowledge creation,** identifying **Knowledge Translation** as a critical platform for research, which will require further development to support Child Health and Wellness.
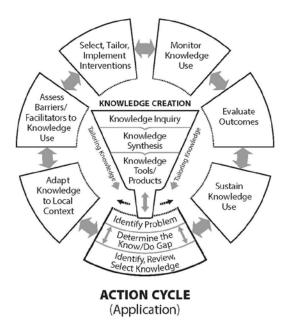
Our plan expands on this, **inviting children, families, and community partners to help shape research questions** that are deeply relevant on the front lines of policy and practice. As with UCalgary's plan, the Child Health and Wellness blueprint emphasizes that knowledge translation is essential to all research - from bench to bedside into the community and back.

The Child Health and Wellness community engagement plan also aligns with Alberta Health Services' framework in this realm. AHS' mandate as a learning health system offers tremendous opportunities for research collaboration and better outcomes for the children and families at the heart of our work. AHS Strategic Clinical Networks (SCNs), particularly the Maternal Newborn Child and Youth SCN, are essential partners in accelerating impact through **"engaging stakeholders to identify meaningful, evidence-based opportunities for transformational change."[39]**

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[37] https://ethics.gc.ca/eng/tcps2-eptc2_2018_chapter9-chapitre9.html
[38] https://www.ucalgary.ca/provost/strategic-initiatives/carnegie-community-engagement-pilot
[39] https://www.albertahealthservices.ca/assets/about/scn/ahs-scn-amh-roadmap.pdf

ACTION CYCLE
(Application)

The transformational roadmaps articulated by the SCNs provide invaluable guidance for Child Health and Wellness planning, particularly how to scale up and spread the implementation of new knowledge. This process is critical to fostering better outcomes for children, families and communities. Sharon Straus and colleagues' dynamic "knowledge to action" framework is foundational to our approach (**Figure 12**).[40]

Figure 12: Implementation Process: Knowledge to Action Cycle

The Child Health and Wellness community engagement blueprint is durable, sustainable and outcome-oriented

Aim 5a: Work with partners to accelerate research and amplify outcomes

Child Health and Wellness researchers are undertaking scholarly activities across UCalgary and AHS with a diverse range of partners. Our dynamic relationships with community leaders, children, families, alumni, ACHF, child and youth serving agencies as well as system and sector leaders enable us to undertake robust, relevant research. **These relationships allow us to co-design research to accelerate outcomes and mobilize new knowledge as never before.** As we expand Child Health and Wellness research collaborations with industry, governments, and research teams across Canada, we will leverage the power of those networks to maximize the impact of our discoveries.

Aim 5b: Define the terms of engagement to foster clarity, efficiency and build trust

As we embark on partnered research projects we will begin with a shared understanding – a co-created agreement around the terms of engagement. **Project charters will allow us to define the collaborative relationship**, including roles and responsibilities. We will draw upon existing partnership agreements to inform project charters, including, for example, the (former) Southern Alberta Child and Youth Health Network (SACYHN) affiliation agreement, Owerko Memoranda of Understanding, and CUPS' frameworks for community-embedded research.

"Community engagement is about the willingness of researchers to stay at the table over time, and across the environment to support the shared agenda." – Dr. Suzanne Tough, Professor, Cumming School of Medicine

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[40] Straus, Tetroe, Graham; "Knowledge Translation in Health Care: Moving from Evidence to Practice", 2nd Ed. 2013

Aim 5c: Reciprocal relationships are the cornerstone of community-partnered research
There is a diverse portfolio of community-engaged research already underway across Calgary and beyond. **The Child Health and Wellness strategy will support and build upon existing community-engaged research, and facilitate new connections between research and community partners.** Activities include: mapping out eco-system of existing community-partnered research; connecting researchers with one another, children, families and community partners; representing Child Health and Wellness research at community-led initiatives and conferences to enhance Child Health and Wellness visibility, grow our networks, fuel integrated research collaborations, and accelerate outcomes.

Aim 5d: Community partnership committee's advice and support ensure discoveries become measurable actions
An advisory committee of diverse community members will provide invaluable advice for research plans and projects. Benchmarks from partners will guide the composition of this advisory group including the Women's and Children's Health Research Institute (WCHRI) community committee, the University of Calgary Carnegie committee, relevant Strategy for Patient-Oriented Researcher (SPOR) committees (e.g. Child Bright[41]), and the United Way's Council of Champions. Potential members include those from system/sector hubs (e.g. Policywise), community partners with demonstrated strengths in knowledge mobilization, and agencies already deeply partnered with UCalgary/AHS on research (e.g. CUPS, formerly Calgary Urban Project Society).

Committee members will provide reviews of knowledge translation and stakeholder engagement components of research grants, particularly those invested in community-partnered research. These reviews will feed into the academic peer review process. This committee will also provide advice around knowledge translation and implementation strategies.

Aim 5e: Communications and Community Engagement activities spark new collaborations, celebrate and mobilize discoveries
We will invite community partners to relevant Child Health and Wellness events, trainings and grand rounds. We will also support researchers and trainees to attend community events to enhance relationships and support research goals. Leveraging existing resources, ACHRI will develop a living toolkit of resources to support researchers in community-partnered research. The Child Health and Wellness toolkit will include: products (templates, boilerplates, knowledge translation checklists) and people (database of graphic designers, videographers, social media gurus, knowledge translation experts).

Community partners will help amplify research findings through collaborative communications and social media strategies to mobilize knowledge and cultivate future collaborations. Communications plans include enhancing social media connectivity with key partners (guided by eco-system map). Child Health and Wellness communications will nurture and expand partnerships across UCalgary Faculties, Departments and Institutes, the ACHF, the Alberta Children's Hospital, AHS and the AHS Strategic Clinical Networks, and community partners to amplify stories of research and education with impact for children and families at forefront of all stories.

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[41] https://www.child-bright.ca

To reflect the growing Child Health and Wellness community, ACHRI's weekly newsletter will expand features on community impact, invite community partners to contribute articles, upcoming events and news, and encourage interested partners to subscribe.

We will invite community partners to co-present on shared research at UCalgary community engagement events (town halls, library events), and highlight community-partnered research at Child Health and Wellness events such as ACHRI's annual research retreat, Science in the Cinema, lectures and grand rounds.

Aim 5f: Introduce grants of varying scope and scale to foster community-partnered CHW research

We will introduce community-focused grants (similar to WCHRI's Clinical/Community Research Integration Support Program (CRISP) grants[42]) to increase our capacity to do community-partnered research and maximize impact to meet community needs. The initial three-year term of these grants can be extended if additional knowledge translation will accelerate impact, and/or scope and spread.

Grand challenge research questions should arise at the intersection between key recommendations in current government reports, community-identified priorities (worksheets from Community Town Hall), and **quantifiable shared areas of concern for researchers and partners**. Preference will be given to proposals in the realm of prevention and promotion. Key features of community-partnered grants will include: community stakeholder/s as co-applicant/s; focus on local, tangible, and specific problems or gaps; resources allocated to community partner/s; **integrated knowledge translation** with a road-map for implementation shared by all partners; commitment from Principal Investigator to mentor young investigators and trainees in community-engaged practices.

Community-partnered grants, supports and program offerings are expected to evolve with input from our community committee, in keeping with the principles of co-creation and mutual benefit.

Aim 5g: Build the skills and culture to foster robust partnerships with community partners through training programs

We will identify existing knowledge translation and community engagement training opportunities and resources available to Child Health and Wellness researchers and trainees to create a **hub of support for community-engaged research.** Current resources in this arena include: Canadian Child Health Clinician Scientist Program knowledge translation sessions, social action hub for community led research (in development, Katrina Milaney, Community Health Sciences, Cumming School of Medicine), knowledge translation resources and consultations within AHS (Kelly Mrklas), training sessions offered by ACHRI, Cumming School of Medicine, and the University of Calgary, as well as provincial offerings such as Alberta Innovates' Patient Engagement and Knowledge Translation platforms.[43]

Our eco-system map of community-engaged research will include champions of community engaged research. Mentorship activities will include: brown bag lunches for new / young researchers and trainees, and a peer-support/mentorship program to build capacity and skills for community engaged research.

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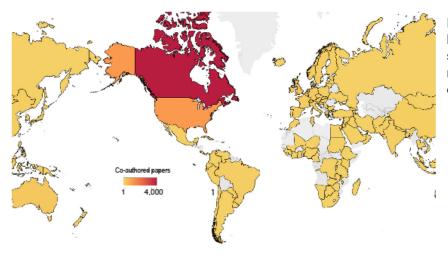
[42] https://www.wchri.org/CRISP
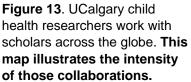
[43] https://spor.albertainnovates.ca

We can also build capacity by tapping into undergraduate and graduate practicum courses embedded within community settings. For example, Faculty of Kinesiology undergraduate students take credit courses embedded in schools and community agencies, working with newcomers, children and families. Psychology, Social Work, and other Faculties offer these practicums for a substantial number of students. **This is a significant benefit not only for our students, but also to our community partners.** While building understanding and empathy of community needs within our trainees, these practicum experiences also grow our capacity to co-create and nurture research with community partners.

Objective 6: Foster national and international partnership, leadership and research in child health

Our child health scholars are internationally recognized in their respective fields and we are immensely proud of their efforts and accomplishments. We will continue to recognize and invest in researchers who are leading and contributing to national and international child health research initiatives. The impact of their work is felt well beyond UCalgary.

Figure 13. UCalgary child health researchers work with scholars across the globe. **This map illustrates the intensity of those collaborations.**

Aim 6a: Matching funds for large-scale national and international team grants
We will provide matching funds for external grant applications to enable UCalgary Child Health and Wellness researchers to be competitive for these awards. Matching funds will be prioritized for grants that fit the Child Health and Wellness research priorities.

Aim 6b: Funding support for trainees to participate in national and international research exchanges that align with strategic research priorities
Our trainees benefit from and contribute to child health initiatives across Canada and around the world. It is equally valuable for trainees from outside UCalgary to build skills and collaborative networks through placements here at the UCalgary. We will support trainees in diverse training experiences in Child Health and Wellness research teams across the globe.

Aim 6c: Support CHW researcher participation and leadership in international research initiatives
There are many ways in which Child Health and Wellness researchers contribute on the international stage. We will support members to join international research consortia, coordinate and present at international workshops and conferences, and participate in national and international working groups.

Dr. Debbie Kurrasch is supported by the France Canada Research Fund to study the mechanism of sugar craving in collaboration with researchers in France. Dr. Jiami Guo leads an international research effort to understand the developmental contexts of cilia signaling in the brain. Dr. Marie Claire Arrieta Mendez heads a global team to examine dietary-microbial interactions in the gut. Dr. Stephen Freedman led an influential clinical trial showing efficacy of oral ondansetron to promote rehydration in low- and middle-income countries.

Aim 6d: Work in partnership with UCalgary experts in global child health

Several of our members are making significant leadership contributions to global health initiatives such as *Mama Ntoto* to improve maternal, newborn, and child health in Tanzania. *SIM for Life* is another example. In 2016, a team in Uganda invited UCalgary researchers to team up on *Uganda SIM for Life*. Together, they trained 75 faculty facilitators, 642 medicine and nursing students, and launched a peer-to-peer practice program for 442 health care workers at 36 health centres between 2016 and 2019. This led to improved team performance, and accelerated resuscitations for newborn babies. These international initiatives are large, complex, multijurisdictional projects funded by several different sources. The benefits of these collaborations extend far beyond the projects themselves – to our students, researchers, and back into clinical care in our own community.

To maximize the potential for global impact, we will work in close partnership with those already engaged in global health research, particularly with the Cumming School of Medicine's Strategic Partnership and Community Engagement (SPaCE) office and with the Canadian Coalition for Global Health. To that end, we will propose work with SPaCE leadership/alumni to assess barriers in obtaining funding for capacity-building in global health as a first step toward addressing these barriers.

Objective 7: Create a sustainable framework of support for the Child Health and Wellness strategy

Child Health and Wellness researchers have enjoyed a dynamic relationship with the ACHF for more than four decades. Unwavering support from ACHF and trust in ACHRI has allowed us to successfully recruit national leaders and rising stars in the Child Health and Wellness community to the University of Calgary, and through **start-up funding**, they have undertaken outstanding child health research here. In the last five years, ACHRI has committed start-up funding to recruit 40 academics in partnership with several UCalgary academic departments, including 6 of 25 available 'P25' faculty positions. ACHF's investments into **matching and bridge funds** have allowed ACHRI to support UCalgary child health researchers in building and sustaining invaluable research ideas and programs. ACHF has also provided core funding for **operational staff**, research **training support** for graduate and post-doctoral trainees, as well as clinical research support. Through separate funds raised by ACHF (including endowed and spend-down research chairs, internal ACHRI-administered awards, ACHF-funded Child Health Grants), ACHRI researchers have initiated **major research programs and projects** with substantial outcomes in many domains.

All of this has led to a steady rise in our capacity for high quality research – as evidenced by publications and escalating successes in competitive external research funding competitions. Child health researchers across campus are now recognized as local and international leaders in precision health, brain development and function, child and adolescent mental health, health promotion through early life interventions, mechanisms of pregnancy and its outcomes, recognition and treatment of rare diseases, childhood inflammation, infection, and cancer - just to name a few.

So how do we sustain our upward trajectory, continue to build capacity and nurture impactful collaborations and partnerships across campus and with community? We will do this by: (1) optimizing ACHRI's organizational structure to foster **internal sustainability** to deliver on the Child Health and Wellness strategy; (2) ensuring the **sustainability of research** conducted by Child Health and Wellness researchers.

Aim 7a: Internal sustainability – ensuring proficiency, accountability, and efficiency[44]
ACHRI has built a cohesive core staff team that includes administrative support; HR, financial, and program management expertise; communications and community engagement expertise and support; grant development expertise; as well as expertise in local research and funding process requirements. ACHRI staff work closely with departments and institutes across UCalgary, and the Alberta Children's Hospital to maximize efficiencies. We have established processes and guidelines for research investments and programs, ensuring feasibility within the existing UCalgary context and synergy with our partners at ACHF.

To match the growing needs of Child Health and Wellness researchers across campus and fill identified gaps in internal service delivery, we are regularly assessing our service offerings for Child Health and Wellness researchers in specific areas. Recently, we have hired additional **administrative support** for the seven programs described in Objective 2 and the expanded training program scope described in Objective 4. We anticipate a near-term need for

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[44] Crafting and Executing Strategy: The Quest for Competitive Advantage, Concepts and Cases (2014). McGraw-Hill/Irwin (19th ed.). New York, NY

additional **operational research support** to serve the increasingly broad community of Child Health and Wellness Scholars (including impact evaluation support), as well as **expertise in financial management** to oversee specific components of the Child Health and Wellness budget and maintain a high level of financial accountability (administered through ACHRI and accountable to UCalgary's Vice President Research and the ACHF).

The culture of research excellence envisioned by this strategy is matched by a culture of excellence within the ACHRI team. This includes opportunities for staff to acquire, develop, and strengthen skills to facilitate and promote child health research (e.g. staff training in research evaluation and knowledge translation).

Good governance is also an essential requirement to sustain the Child Health and Wellness strategy. A commitment to good governance is a commitment to accountability. Our proposed governance structure builds upon existing governance processes within ACHRI. Good governance begins with ACHRI Directors as well as Program and Centre Directors sharing operational oversight of the Child Health and Wellness strategy with accountability to the Child Health and Wellness Executive Committee and, ultimately, to the UCalgary Vice President Research (see **Appendix** page 18 for draft governance structure). The value we place on transparency is reflected in our governance structure and processes; transparency is essential to establishing trust within our child health research community and with our partners and stakeholders. Good governance is bi-directional and includes ongoing consultation and engagement with members. This approach allows us to meet the needs of our research community, and therefore, accelerate outcomes of research for the children, families and communities we serve. Bi-directional governance also means processes for regular monitoring and reporting on the progress of our members, as well as processes for reporting to internal and external stakeholders. Of course, good governance is also critical for efficiency – so that recommendations and decisions are made in a timely manner.

Good governance and accountability are also demonstrated through the operational best practices we are developing to manage investments in child health and wellness. We will create activity-based budgets to accommodate the funding allocations outlined in the preceding objectives and in **Table 2** below. Activity-based budgets will reflect research activities that match the goals set by each project holder and respective teams of researchers and collaborators. ACHRI will build upon its strong track record of financial management; we will provide regular **analytics-based reporting** to monitor spending trends and budget variances for approved projects. We will also ensure that new projects are initiated in a timely and feasible manner through forecasting and budgeting support. When institutional policies do not fit with the changing landscape, we will advocate for change.

ACHRI's core team **manages space and infrastructure** on behalf of its members, always looking for ways to optimize use of the resources with which we are entrusted. We will continue to provide this support to Child Health and Wellness researchers, working in partnership with other Institutes and Faculties to ensure all Child Health and Wellness researchers have a good environment in which to conduct research.

Aim 7b: External sustainability – matching strengths to opportunities

Excellent communication with external partners and stakeholders provides a critical link to external sustainability, though its impact is often hard to measure. Relationships are built through communication. Awareness of local child health research initiatives can be an incentive

for future investments by the broader community. A connected community is a supportive community and relationships outlast funding timelines of individual projects. Much of our communication is done in partnership with UCalgary and ACHF. We will continue to refine our communications strategy to promote our Child Health and Wellness research community and the impact of its discoveries using our diverse framework of communications mechanisms and resources.

Knowledge translation is a specific form of communication that focuses on synthesizing and disseminating evidence to stakeholders and those who put knowledge into practice, regardless of where on the pipeline that evidence lies, from fundamental discovery to results from large populations. Our researchers need **expertise in knowledge translation** throughout the entire research eco-system.

We will **leverage investments** in child health and wellness made by our partners to maximize impact; excellent research should continue far beyond the life cycle of any one particular grant. We will:

- support **external team grant applications** that match our strategy research priorities to sustain research initiated by ACHF investments, through grant development expertise and matching funds
- develop **cost-recovery models** and pursue **external contracts** for core services
- **partner with AHS**, through Strategic Clinical Networks, to operationalize evidence-based research findings that are ready to scale up and/or spread
- partner with the Hunter Hub for Entrepreneurial Thinking, Innovate Calgary, WELab, and other innovators to **pursue commercialization and entrepreneurship opportunities**
- explore opportunities for **endowment** with our funding partners to foster long-term sustainability

Investing in a Child Health and Wellness Strategy

With guidance from several Child Health and Wellness stakeholders, we have developed a comprehensive plan for investment to support the Child Health and Wellness strategy. This plan includes continuing investment in all of the areas ACHRI has previously supported, while also proposing new areas of investment to enable our child health research community to drive science forward. **Table 2** describes specific areas of investment to support individual objectives – in reality, many of these investments support multiple objectives. The Child Health and Wellness strategy will be funded through generous collaborative support from the University of Calgary, our partners at ACHF and externally through partnerships and philanthropy. Initial funding provided by the University of Calgary to develop this strategy has allowed us to meaningfully engage across campus, and with child and youth facing community agencies. The University of Calgary has committed $1 million to help launch the Child Health and Wellness strategy, while ACHF has committed $15 million – the ACHF Research Excellence Fund – to fuel its execution.[45]

We recognize that the proposed investment areas summarized in **Table 2** require even more than what has already been committed. However, we are inspired by our generous community and believe that proposed areas of strategic investment demonstrate our readiness to turn future investments into accelerated outcomes for our children and families. **Investment in our child health and wellness objectives are investments in the future**.

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[45] Reference letter from Saifa Koonar, President/CEO ACHF to Dr. Ed McCauley, (former) VPR

Table 2: University of Calgary Child Health and Wellness Strategy: Investments and Impacts

Strategy	1) Build a culture & community of research excellence	2) Create research programs to match priorities	3) Create and support child health research cores & platforms	4) Equip and foster the next generation of child health researchers	5) Foster partnerships with children & communities to drive research	6) Foster international partnership, leadership and research	7) Create a sustainable support framework
Investment	Staff scientists Faculty recruitment* • Start-up Endowed chairs* Bridge grants* Matching funds* Seed grants • High risk, high reward	Grand Challenge Program Awards *(administered through ACHRI Programs)* • Program-prioritized grand challenges	Partly funded via Grand Challenge Program Awards: • Advanced technologies and research facilities • Training and service support • Best practices (equitable access, metrics for success)	Competitive stipend support* • Stand-alone and partnered trainee support Training courses, seminars, travel* Experiential learning	Community-partnered grants • Including KT, evaluation and QI Publication grants	International trainee support • Internal and external Consortium membership International research leadership development	Core funding to support: Leadership* • ACHRI Directors • Program & Centre Directors Staff* • Research support • Communications, KT & Community engagement • Training program management • Finance • Admin
Impacts	• Enhance team grant success • Sustain research productivity • Drive science • Drive innovation • Transform care • Increase international reputation	• Address specific knowledge gaps • Create teams to improve grant success • Transform care	• Enable cutting-edge research • Enhance grant success • Increase publication impact • Drive recruitment • Transform care	• Train HQP • Increase and sustain research capacity and productivity • Enhance community partnerships • Increase industry partnership	• Enhance community partnerships • Increase industry partnership • Transform care • Accelerate knowledge application into practice • Accelerate use of evidence into policy	• Increase and sustain research productivity • Drive science • Transform care • Increase international impact and reputation	Provide/ foster: • Leadership • Strategy (priority setting) • Communication • Sustainability • Coordination • Collaboration • External partnerships • Impact evaluation

* denotes areas of current CHW investment by our funding partner ACHF; these investments have catalyzed major advances in child health and wellness over the past 10 years and will continue to provide foundational support for child health and wellness over the coming years

Measures of Success: CHW Evaluation Framework

Research teams have a social obligation to deliver on the goals in their research proposals. Current trends place a greater emphasis on metrics and outcomes for research projects and programs. It is critical that funders and institutions see the return on their investments. Funding agencies now routinely require funded researchers to report on metrics as indicators of money well-spent. Academic departments require researchers to demonstrate productivity in order to advance their careers.

How will we know if our Child Health and Wellness strategy is successful? By the collective impact of the people, programs, platforms, partnerships and activities in which we invest. Impact is defined and measured in several domains and on several levels. Greenhalgh *et al*[46] offer several definitions of research impact. Research can have:

- **academic impact** – demonstrable contribution "to advances, across and within disciplines, including significant advances in understanding, methods, theory and application"[47]
- **health impact** – "changes in the health functioning of individuals (physical, psychological, and social aspects of their health), changes to health services, or changes to the broader determinants of health"[48]
- **social impact** – "changes that are broader… and include changes to working systems, ethical understanding of health interventions, or population interactions"[48]
- **economic impact** – "the benefits from commercialization, the net monetary value of improved health, and the benefits from performing health research" [48]

The University of Calgary has tools and resources to help us collect metrics to measure academic impact. For example, UCalgary's institutional subscription to SciVal facilitates benchmarking and visualization of research performance for individuals or groups - curated based on data from Scopus. Institutional Tableau dashboards (along with underlying data) are useful for tracking individual-level external research investments, publications and collaboration amongst UCalgary Child Health and Wellness researchers.
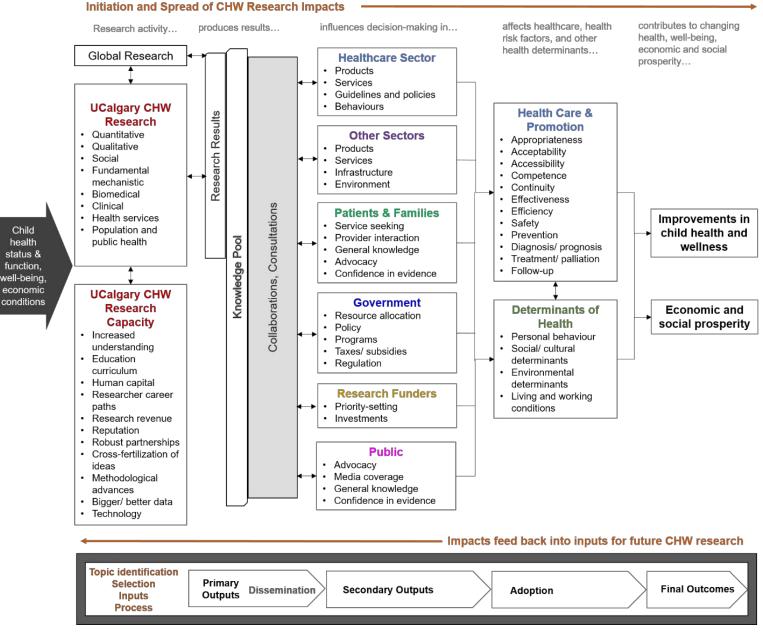
We expect all of the objectives within this strategy to have impact in more than one domain. Impacts can be produced and measured on multiple levels, including individuals, groups, platforms and infrastructure, and specific activities. **To help guide evaluation of the CHW strategy, we have adapted the Canadian Academy of Health Sciences (CAHS) Framework**,[48] which offers metrics and measures for all relevant domains and impacts at all levels. This framework also considers impact in capacity-building and informing decision-making, both highly relevant for this strategy. Also of note, the CAHS Framework includes metrics to **assess all of the dimensions of quality emphasized in the Alberta Quality Matrix for Health**, which is widely used throughout AHS.

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[46] Greenhalgh, *et al*. "Research impact: a narrative review" *BMC Medicine* (2016) 14:78

[47] Research Councils UK Pathways to Impact (http://www.rcuk.ac.uk/innovation/impacts/)

[48] Canadian Academy of Health Sciences: Making an Impact, A Preferred Framework and Indicators to Measure Returns on Investment in Health Research; available at https://secureservercdn.net/166.62.107.204/cpp.178.myftpupload.com/wp-content/uploads/2011/09/ROI_FullReport.pdf (accessed January 30, 2020)

Metrics for individual objectives related to specific areas of impact are outlined below. No one model is ideal because evaluation is, and should be, an iterative process; Child Health and Wellness researchers and community partners will design and implement novel indicators and analysis to measure their work on an ongoing basis. The majority of indicators to assess impact are quantitative and provide little information to help measure well-being. **We recognize that assessing research impact is much more than numbers and statistics.** There will always be room for narrative accounts of impact. **In the end, our Child Health and Wellness strategy aims to tell the story of a child whose future is healthier through research**.

Figure 14: Adapted Canadian Academy of Health Sciences Framework for evaluation of impact

Objective 1: Evaluating our Culture and Community

In assessing whether we have created a culture and community of Child Health and Wellness research excellence, our purpose is two-fold; we want to **enhance opportunities for Child Health and Wellness researchers to have impact** and **remove barriers** to their success. This purpose is inherent throughout our objectives, extending to Child Health and Wellness research programs, trainees, partnerships and collaborations. Impact indicators will be assessed at the individual and group aggregate level.

Impacts of individual researchers will be captured in a modified annual Child Health and Wellness Researcher evaluation that is complementary to reporting required by UCalgary departments (e.g. Annual Report Online). We request from each Child Health and Wellness Researcher on an annual basis: (1) an updated CV, (2) highlights of recent successes, (3) barriers to impact. In addition to publications and external grant successes, our impact framework values outputs such as building capacity, engaging with children, families and the broader community, as well as leadership (internal and external) activities.

Metrics for collaborative teams include:
- Enhanced submissions to team grant funding opportunities
- Enhanced funding success of existing and new multidisciplinary collaborative teams
- Advanced training opportunities provided within research teams
- Effective partnerships with Child Health and Wellness stakeholders, including AHS, community agencies, other sectors (e.g. industry), and policymakers
- External reputation (the extent to which UCalgary Child Health and Wellness researchers are recognized by external researchers, experts, and leaders)
- Contributions to and participation in external Child Health and Wellness-relevant consortia and networks

To maximize impact through collaboration and interdisciplinary teams, we propose the following S.M.A.R.T.[49] goal: to double the number of investigators from Faculties other than the CSM who are engaged as Child Health and Wellness scholars.

Objective 2: Evaluating Research Programs and Program Investments

Research Programs are designed to exist in five-year terms. In year four of each term, each of the seven programs will be assessed for progress towards their overall goals. Assessment metrics for programs include many of the same metrics as Objective 1, with additional considerations below.

- Collaborative publications and citations within and across programs
- Trainee and student integration into research programs
- Child, family, and community participation in research program activities
- External awards and recognitions of program members, including trainees
- Commercialization activity and industry collaborations
- Education course additions and curricula changes that support research programs
- Uptake of new care pathways and novel interventions in the healthcare system

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[49] S.M.A.R.T. – Specific, Measurable, Achievable/Attainable, Relevant, Time-bound

- Policy changes influenced by work of Child Health and Wellness research program members
- Public awareness of research conducted through the research programs (public events, media coverage, community and child and family involvement on research committees and panels)
- Community practice changes guided by research evidence

At the conclusion of each review, the Child Health and Wellness Executive Committee will assess whether the program should continue as is, recommend revisions to meet its goals, or propose a new area of thematic focus to meet program goals. This will allow the scientific focus of the Child Health and Wellness strategy to evolve as the internal and external conditions change.

Program investments, exemplified in the Grand Challenge Program Grants, will be evaluated based on a common set of criteria, similar to criteria used in evaluation of our research programs (listed above), but more specific to the research outputs and outcomes of the award.

Objective 3: Evaluating Cores and Platforms

Core facilities and service platforms exist to serve the needs of research programs and are critical for building capacity within the Child Health and Wellness strategy. We will work with directors and leaders of core facilities and service-based platforms to set measurable and attainable targets that allow benchmarking against similar facilities and platforms, here and elsewhere. We will set targets in the following areas, as appropriate to the nature and capacity of the facility:

- Publications and technical reports authored by core facility/ platform service personnel
- Publication acknowledgements of core facilities/ platform services
- Projects supported (internal and external)
- Personnel trained (internal and external)
- Growth rate (absorptive capacity)
- Annual cost-recovery (% of annual budget) and source
- Successful grants that include use of core facility/platform

Objective 4: Evaluating Success of our Training Program

The Child Health and Wellness training program is central to ensuring the Child Health and Wellness strategy today, and into the future. Over the next five years, we will double the number of Child Health and Wellness trainees supported by competitive scholarship and fellowship awards (S.M.A.R.T. goal). We will conduct an annual review of Child Health and Wellness trainees to continuously improve support. Trainee metrics will closely match those for Child Health and Wellness researchers and include career tracking post-training.

The Child Health and Wellness training program will be evaluated in five-year terms. For each aim, metrics of success will be developed *a priori*, using the CAHS Menu of Preferred

Indicators and Metrics of Impact.[50] Results will be benchmarked against other UCalgary strategies and external initiatives focussing on child health, using comparable indicators wherever possible. Training program leaders will decide on measurable and attainable benchmarking targets. Results and proposed modifications will be shared with Child Health and Wellness research program directors and governance committees to continuously improve Child Health and Wellness trainee experiences and the quality and capacity of our program.

Objective 5: Evaluating Community Impact

Feasibility is key in community-partnered research. We need unique and tailored measures when assessing community-engaged research, knowledge mobilization and translation. We will be guided by others in developing these measures, including the Canadian Academy of Health Sciences, CIHR, Research Fish, Alberta Innovates' SPOR, and Community-University Partnership for the Study of Children, Youth, and Families (UAlberta).

While academic publications, conferences and book citations are essential measures of academic impact, we will also incorporate additional measures to assess the impact of our research with community partners. Examples of these measures include: evidence briefs, literature reviews, technical reports, presentations to stakeholders and boards; Memoranda of Understanding; community-partnered grant applications; papers co-authored with community partners. Process and feasibility measures will be important for community-partnered research projects. Measures of success for community-engaged research include: we work together to generate evidence that informs policies and guides best practices; our research asks and answers questions to help the most vulnerable, at-risk families and children in our community; community partners drive research questions, and stay motivated to sign onto ongoing research with us.

We will learn from a decade of community-embedded research within UCalgary's Owerko Centre to implement such measures of impact and outcomes for our Child Health and Wellness strategy. A Child Health and Wellness community committee will also help design appropriate measures for community-partnered research.

Objective 6: Evaluating National and International Research Impact

Many of the same metrics used to evaluate individual researchers and collaborative research programs provide indicators of national and international research impact. These include:

- Success of external national and international team grant applications involving Child Health and Wellness researchers as PI's or co-investigators
- Trainee participation in national and international research exchanges
- Membership and leadership of Child Health and Wellness researchers in national and international research consortia
- Participation and leadership of Child Health and Wellness researchers in national and international workshops, conferences, and working groups

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[50] Canadian Academy of Health Sciences, Panel on Return on Investment, 2009. https://www.cahs-acss.ca/wp-content/uploads/2011/09/ROI_FullReport.pdf

Objective 7: Evaluating Child Health and Wellness Sustainability

We will assess our capacity to support our community of Child Health and Wellness scholars on an ongoing basis by listening to and responding to the needs of Child Health and Wellness researchers – always anchored in the priorities, values, goals and objectives mapped out in this plan. Internally, we will continue to track all funding requests: internal grants, matching, bridge, and one-off funding requests. Through other non-duplicative reporting mechanisms (e.g. annual member CV updates, annual research progress reports), we will establish leveraging metrics. This will allow us to track chronological pathways and networks from investment to impact on several levels. Tools such as *SciVal* and existing *Tableau* dashboards will help us create and visualize these attribution pathways or networks. We will ensure that support staff are skilled in the use of tools to track and visualize research impacts.

Finally, we will also collect qualitative impact narratives to provide insights far beyond the numbers and statistics. We are well-equipped to tell stories of the impact of research on children, families, caregivers, healthcare providers, schools, clinics, and community groups and will continue to leverage our story-telling expertise to support this Child Health and Wellness strategy.

Final words

UCalgary's first-ever Child Health and Wellness strategy is designed to drive transformational outcomes for children and families in our community and beyond. Child health and wellness researchers are a passionate group, with diverse skills and perspectives. As we learn from the knowledge and lived experiences of children, families and community partners, we will address the challenges of child health as never before. Our dynamic culture of collaboration across the University of Calgary, the Alberta Children's Hospital, Alberta Health Services and in partnership with the community allows us to tackle the complexity of those grand challenges. We have all of the ingredients for success: a **critical mass** of stellar researchers; the **generous support** of our community; and **integration of research** with organizations that care for children and their families.

Integration is foundational to the CHW strategy: building on the UCalgary Strategic Research Plan; integrating and accelerating UCalgary's strategic research themes; contributing to UCalgary's blueprint for equity, diversity and inclusion; aligning with UCalgary's Indigenous strategy, *ii' taa'poh'to'p,* and CSM's promise for social accountability through the *Indigenous Health Dialogue;* amplifying Alberta Health Services' commitment to patient and family engagement through a learning healthcare system; leveraging UCalgary's burgeoning framework for innovation; and, following the path of UCalgary's community engagement blueprint, partnering with community agencies and leaders to address the most critical threats to child health and wellbeing today.

This is the perfect time to take child health and wellness research at the University of Calgary to the next level. The impact? **Better health and wellbeing of children and their families here and around the world.**

A heartfelt thank you goes out to:

Child Health & Wellness Strategy

Executive Summary

Spring 2020

UNIVERSITY OF CALGARY

Alberta Children's HOSPITAL RESEARCH INSTITUTE

Dear Directors of the Alberta Children's Hospital Foundation,

We are deeply honoured to share with you the first strategic plan for child health and wellness that encompasses the entire University of Calgary campus. Spanning 2020–2025, this plan charts a course for our researchers and clinical scientists to tackle the challenges of child health and wellness as never before. With this plan, we become the first university and children's hospital in Canada to put children and families at the centre of our research, creating a movement to transform the future for children and families.

Thank you for your tireless support for our diverse community of child health and wellness scholars. Forty years of generous philanthropic investment have enabled and empowered our research community to create this plan which is both aspirational and achievable. The University of Calgary and the Alberta Children's Hospital are ideal environments in which to address research grand challenges in child health and wellness. Building on the University's Eyes High Strategy, this strategic plan is closely integrated with UCalgary Strategic Research Themes, complementing and building upon existing areas of research excellence across campus. Our plan is also designed to incorporate the knowledge and lived experiences of patients, families and community partners, allowing us to drive science and introduce treatments for the most critical problems facing children today.

Our strategic goals:

Conduct **HIGH QUALITY, INTERNATIONALLY-RECOGNIZED** child health and wellness research for **CHILDREN & FAMILIES**

Become national and international leaders in **INNOVATIVE AND TRANSFORMATIVE** research from bench to bedside to backyard and back

Advance national leadership in **COMMUNITY-PARTNERED, CHILD AND FAMILY-CENTRED** health and wellness research

Lead **EVIDENCE CREATION, EVIDENCE-INFORMED HEALTH PROMOTION AND POLICY DEVELOPMENT** with and for children and their families in Alberta and beyond

Thank you for being such incredible partners, investing and believing in our work. Together, we are embarking on a new era in child health and wellness – an era in which children, families and community are at the heart of every decision we make. We have all of the ingredients for success: a critical mass of stellar research; integration of research with our partners who care for children and their families; campus-wide engagement; and the generous support of our community. Thank you for your unflagging support and wisdom.

Dr. Susa Benseler
Director
Alberta Children's Hospital Research Institute
Husky Energy Chair in Child and Maternal Health
ACHF Chair in Pediatric Research

Dr. Marinka Twilt
Scientific Director
Clinical Research

Dr. Benedikt Hallgrimsson
Scientific Director
Basic Science

This strategy is dedicated to the children and families we serve.

When patients and families help drive research, we transform care and save lives. The integration of patient needs, clinical care, and research is one of our superpowers – that integration is what sets us apart. Another of our superpowers is our dynamic culture – one that spans the University of Calgary, Alberta Children's Hospital, and deep into the Calgary community. Our shared goal: to address grand challenges in child health and wellness.

Child Health and Wellness Research

Child health research is life trajectory research. Problems of health and wellbeing in early life have life-long and sometimes multi-generational consequences. When we effectively treat illnesses, and prevent stressors in babies and children, the benefits to human health are monumental. By better addressing health and well-being early on, we help parents, caregivers, and service providers set children on the path to a healthier future.

Community support has allowed UCalgary researchers to make discoveries with local, national, and global impact. Among their many achievements, our child health and wellness scholars have: transformed how we prevent, detect, and treat concussions in youth sport across Canada; changed how emergency rooms around the world treat children with gastroenteritis; developed a blood test to identify women at risk of preterm birth; introduced rapid

diagnosis whole genome testing for children who are critically ill; revealed how gut microbes of moms and babies impact their risk of asthma and other diseases; and allowed children with physical disabilities to use their brain signals to power technology. Calgary is the first place in Canada constructing a dedicated mental health centre with research built into its foundations, setting the stage for exceptional mental health discoveries. We are so grateful that you have made this possible!

Today, we have a mature research ecosystem in which our investigators are leading larger teams on the national stage, being awarded multi-centre team grants, and asking big questions to solve complex problems with transformational impacts. Thank you for your tireless support of our shared goals for research.

The Next Decade

Years of hard work and thoughtful consultation have culminated in this strategic plan. Researchers, community and thought leaders guided its development in close alignment with the University of Calgary 2018-2023 Research Plan, the 2019-2024 Alberta Children's Hospital Strategic Plan and the Alberta Children's Hospital Foundation's 2019-2022 Strategic Plan.

Last year we embarked on an ambitious journey to engage child health and wellness researchers, health system and community leaders, as well as child and youth-facing agencies on big ideas for research. Our consultations involved 640 participants from 40 organizations and 50 group discussions in a series of six town halls. **The input we received inspired us and challenged us to do better.**

Results from that engagement process combined with a research strength assessment illuminated a sweet spot for child health and wellness: the intersection between our research strengths, the needs of our community, and international trends and opportunities. This plan is designed to accelerate discoveries that will translate into impact for children and families in Southern Alberta and far beyond.

"Research in children is research in life trajectories."

Dr. Janet Rossant
President of the Gairdner Foundation
and keynote speaker at the
10th Anniversary Research Symposium
and Celebration of ACHRI, May 2019

"Patients and their families are the ultimate decision-makers in their own care. Yet the system is not designed to learn from their lived experience and their knowledge is rarely valued. Patients are central to the continuum of care because they are the ones who are always there. Their knowledge is an untapped resource that can be used to improve both their own care and the system as a whole."

Charlie Fischer
Child Health & Wellness Champion

Our Values

excellence

integrity

child & family centred

collaboration

innovation

equity, diversity, inclusion

Strategic Objectives

1 Build a Culture and Community of Research Excellence

1-1 Enable cross-disciplinary groups of researchers

1-2 Build collaborative research culture

Initial Aims:

- Child health and wellness researchers across UCalgary campus become CHW Scholars
- Invest in all stages of research training and careers
- Provide mentorship for early career researchers
- Bring Child Health and Wellness Scholars together through seminars and workshops
- Support culture of research excellence through internal and external communications

2 Create Child Health and Wellness Research Programs at the intersection of strength, need and opportunity

2-1 Healthy Children, Families, and Communities

2-2 Care Transformation

2-3 Child Health Data Science

2-4 Precision Medicine and Disease Mechanisms

2-5 Maternal and Child Health

2-6 Child Brain and Mental Health

2-7 Childhood Cancer and Blood Disorders

Initial Aims:

- Drive transformative research within each program via Grand Challenge Program Grants
- Program teams develop proposals aligned with research priorities and evaluated based on criteria including impact beyond the academy

3 Create and support core research facilities and platforms to enhance productivity and impact

3-1 Develop and expand on cores and platforms

3-2 Meet the needs of research programs and gaps in existing research infrastructure

3-3 Ensure sustainability and flexibility of core resources

Initial Aims:

- Work with researchers to budget for use of core facilities and platforms
- Work across UCalgary to harmonize cost-recovery, access and use policies
- Work with core facilities, platform directors and faculty leaders on sustainability targets
- Pursue licensing and commercialization opportunities with core facility and platform directors in partnership with UCalgary innovation ventures

4 Equip and foster the next generation of child health researchers

4-1 Increase Research Capacity
4-2 Ensure Excellence in Training
4-3 Foster Community

Initial Aims:

- Increase research and training capacity within child health and wellness priority areas
- Increase capacity via stipend/salary support
- Increase capacity through external opportunities for program-specific or cross-cutting training grants
- Establish trainee recruitment in partnership with UCalgary recruitment initiatives
- Enhance experiential learning for trainees

6 Foster national and international partnership, leadership and research in child health

6-1 Support large-scale national and international team grants through matching funds
6-2 Fund trainees for national and international research exchanges that align with strategic research priorities
6-3 Support Child Health and Wellness Scholars to participate in and lead international research initiatives
6-4 Work in partnership with UCalgary experts in global child health

5 Foster partnership with patients and communities to drive research

5-1 Co-design research with children, families and community partners
5-2 Integrate with local, provincial and national plans

Initial Aims:

- Support community-engaged researchers and partners to accelerate research and amplify outcomes
- Introduce grants of varying scope and scale to grow community-partnered research
- Define the terms of engagement to foster clarity, efficiency and build trust
- Create community partnership committee to ensure discoveries become measurable actions
- Enhance communications and community engagement to spark new collaborations, celebrate and mobilize discoveries
- Build the skills and culture to foster robust partnerships through training programs

7 Create a sustainable framework of support for the Child Health and Wellness Strategy

7-1 Internal sustainability – ensure proficiency, accountability, and efficiency
7-2 External sustainability – match strengths to opportunities

Measuring Success

Research teams have a social obligation to deliver on the goals in their research proposals. This plan emphasizes enhanced metrics and outcomes for research to ensure funders and institutions see the return on their investments.

How will we know if our Child Health and Wellness Strategy is successful? By the collective impact of the people, programs, platforms, partnerships and activities in which we invest. Our research will always have impact in more than one domain:
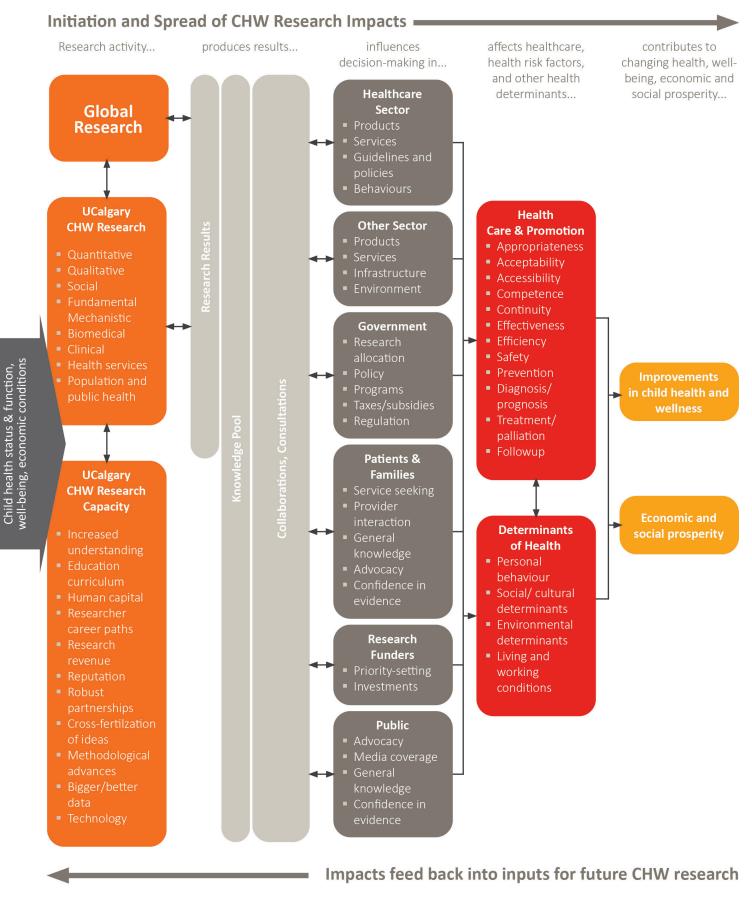
- health impact
- social impact
- economic impact
- academic impact

We have adapted the Canadian Academy of Health Sciences (CAHS) Framework with metrics and measures for domains and impacts at all levels.

Impact in capacity-building and informing decision-making are highly relevant in our work. The CAHS Framework also includes metrics from the Alberta Quality Matrix for Health- widely used throughout AHS. Assessing research impact is much more than numbers and statistics. Impacts on children and families are also essential. Overall, the Child Health and Wellness strategy aims to tell the story of a child whose future is healthier through research.

Measurement Framework

Initiation and Spread of CHW Research Impacts →

| Research activity... | produces results... | influences decision-making in... | affects healthcare, health risk factors, and other health determinants... | contributes to changing health, well-being, economic and social prosperity... |

Global Research

UCalgary CHW Research
- Quantitative
- Qualitative
- Social
- Fundamental Mechanistic
- Biomedical
- Clinical
- Health services
- Population and public health

Child health status & function, well-being, economic conditions

UCalgary CHW Research Capacity
- Increased understanding
- Education curriculum
- Human capital
- Researcher career paths
- Research revenue
- Reputation
- Robust partnerships
- Cross-fertilzation of ideas
- Methodological advances
- Bigger/better data
- Technology

Research Results

Knowledge Pool

Collaborations, Consultations

Healthcare Sector
- Products
- Services
- Guidelines and policies
- Behaviours

Other Sector
- Products
- Services
- Infrastructure
- Environment

Government
- Research allocation
- Policy
- Programs
- Taxes/subsidies
- Regulation

Patients & Families
- Service seeking
- Provider interaction
- General knowledge
- Advocacy
- Confidence in evidence

Research Funders
- Priority-setting
- Investments

Public
- Advocacy
- Media coverage
- General knowledge
- Confidence in evidence

Health Care & Promotion
- Appropriateness
- Acceptability
- Accessibility
- Competence
- Continuity
- Effectiveness
- Efficiency
- Safety
- Prevention
- Diagnosis/ prognosis
- Treatment/ palliation
- Followup

Determinants of Health
- Personal behaviour
- Social/ cultural determinants
- Environmental determinants
- Living and working conditions

Improvements in child health and wellness

Economic and social prosperity

← Impacts feed back into inputs for future CHW research

| Topic Identification Selection Inputs Process | PRIMARY OUTPUTS Dissemination | SECONDARY OUTPUTS | ADOPTION | FINAL OUTCOMES |

Investment in the Strategy

In partnership with ACHF, we will ongoingly support prioritized recruitment, matching and bridge funding, as well as competitive trainee awards. Additional investments in child health and wellness will allow us to launch Grand Challenges to support multidisciplinary, innovative, and transformational research teams that align with the priorities of our Research Programs.

Maintaining impact through current investments:

Startups
Endowed chairs
Internal awards
Bridge funds
Matching funds
Competitive trainee stipend support
Training courses, seminars, travel
Core funding for ACHRI leadership and operations

New investments into Child Health and Wellness:

Staff scientists
Seed grants
Grand Challenge program awards
Experiential learning
Community-partnered grants
Publication and dissemination awards
International training and leadership support

Our first-ever Child Health and Wellness Strategy will drive transformational outcomes for children and families in our community and far beyond.

This is a joint enterprise: building on the UCalgary Strategic Research Plan; aligning with ACH's Strategic Plan; aligning with ACHF's Strategic Plan; supporting AHS' commitment to patient and family engagement in a learning healthcare system; leveraging UCalgary's burgeoning framework for innovation; following the path of UCalgary's community engagement; and partnering with community agencies and leaders to address the most critical threats to child health and wellbeing today.

This is the perfect time to take child health and wellness research at the University of Calgary to the next level. The impact? Better health and wellbeing of children and their families here and around the world. We are so grateful to be on this road together.

UNIVERSITY OF CALGARY

Alberta Children's HOSPITAL
RESEARCH INSTITUTE

Child Health & Wellness

Research Strategy:
Grand Challenges
JUNE 2020

UNIVERSITY OF CALGARY

Children and families are the foundation of Canada's future. Research in child health and wellness is research in life trajectories. When researchers, health care providers, community organizations, children and families identify critical gaps in health and wellness, we can target our research to improve wellbeing, transform care and save lives.

Canada ranks 25th of 41 industrialized countries worldwide on child health and wellbeing.

Together, **we have superpowers** – when we conduct cutting edge research with innovative partners in Alberta Health Services, our community and around the world, we rapidly translate this new knowledge into better care, and improve child and family outcomes in our province and far beyond. An interdisciplinary community of scholars developed the five grand challenges for the emerging, cross-cutting Child Health and Wellness (CHW) strategy. These challenges represent the alignment of strengths, needs and opportunities in child health and wellness at the University of Calgary.

Building on UCalgary strengths, internal and external consultations, and where we can make the greatest impact, we have identified five grand challenges.

Each is viewed through two distinct lenses – the social determinants and biological determinants of child health and wellness. These five grand challenges are tied together by two cross-cutting, complementary approaches within the overarching framework of precision child health. Our precision health promise is to develop preventative measures, diagnoses and treatments targeted to the needs, characteristics and circumstances of each child, or specific populations of children and families. Each of our challenges also benefits from big data and machine learning. Finally, as we apply what we learn, each challenge emphasizes the transformation of health care, education and community systems to benefit patients, children and families (Figure 1).

PRECISION CHILD HEALTH

SOCIAL DETERMINANTS OF CHILD HEALTH

BIOLOGICAL DETERMINANTS OF CHILD HEALTH

FROM VULNERABLE TO RESILIENT
Identifying, understanding and effectively addressing serious threats to children's physical and mental health while empowering families and communities

BETTER BEGINNINGS
Optimizing maternal, fetal, newborn and child health with accurate prediction, prevention and intervention

ENDING THE DIAGNOSTIC ODYSSEY
Rapidly deciphering and addressing the genetic origins of disease to optimize tailored treatments

PUSHING THE BOUNDARIES OF BRAIN & MENTAL HEALTH
Leading discoveries in brain biology, resilience and new therapies for children, teens and young adults

SURVIVING AND THRIVING
Reducing the lifelong impact of childhood cancers by advancing precision therapies today and developing new treatments for tomorrow

HARNESSING BIG DATA FOR OPTIMAL CHILD OUTCOMES

TRANSFORMING HEALTH CARE FOR CHILDREN AND FAMILIES

Figure 1: The CHW Grand Challenge conceptual framework. Grand challenges (orange) are integrated by cross-cutting approaches (blue) and seen through the lenses of social and biological determinants.

Principles & Grand Challenges

Our Grand Challenges are underpinned by a set of principles to ensure success.

Translational Impact
Data-driven with clear mechanisms to translate knowledge into improved health system delivery, diagnoses and treatments, evidence-based policies, and better outcomes for children, their families, our community and beyond.

Achievable
Bold aspirations enabled by coordinated research efforts and investments built upon our strengths and relevance to society.

Inclusive Partnerships
With children at the forefront, strong relationships with families, stakeholders, system partners, funders and community are essential.

Relevant
Reflect the needs of the community gathered through town halls, provincial and national trends and opportunities for partner funding.

Building Community
Ongoing, meaningful and strategic engagement, communication and planning with child researchers across campus and beyond.

Built upon Strengths
Focusing our efforts in established and emerging areas of research strength to maximize impact in child health and wellness.

Confirmed Programs and Priorities
Rooted in programs and priority areas identified through stakeholder consultation and data analysis.

From vulnerable to resilient

Identifying, understanding and effectively addressing serious threats to children's physical and mental health while empowering families and communities.

Decades of research have identified key threats to the well-being of children and families, including poverty, mental health, intentional (e.g. child abuse, suicide) and unintentional injuries, infant mortality, obesity, inactivity, food insecurity, vaccine-preventable illnesses, discrimination, and bullying. The COVID-19 global pandemic has amplified many of these issues for families in Canada and around the world – the effects of which we will see for years to come.

Although the global impact of threats to child and family well-being are well-documented, we need to better understand who is most impacted, how the impacts change with developmental stage, and which individual, familial and contextual factors confer a protective advantage. Further, evidence-based approaches for preventing and mitigating the effects of these threats and improving child health and well-being continues to challenge researchers around the world.

This grand challenge will identify the many factors that influence well-being in children and families, within the framework of the social determinants of health. We will identify modifiable and nonmodifiable factors as well as how these factors interact to impact child health and wellness. The ultimate goals are to develop evidence-based policies, prevention strategies, and interventions. We are uniquely positioned to address this grand challenge, given our multidisciplinary membership, expertise in longitudinal cohort family studies, and extensive experience in knowledge mobilization, health promotion, and policy analysis.

From Vulnerable to Resilient

Identifying, understanding and effectively addressing serious threats to children's physical and mental health while empowering families and communities.

This grand challenge focuses on contributing evidence-based health promotion and primary prevention strategies to enable children, families and communities to reach their full potential.

Key areas of investigation

Understanding healthy child trajectories and supporting at-risk children and families. The Alberta Births Common Data (ABCD) is the harmonization of two of the most comprehensive longitudinal studies of pregnant women and their babies in Canada, All our Babies (now All our Families) and APrON (Alberta Pregnancy Outcomes and Nutrition). The All our Families study is a lifecourse analysis of the relationship between prenatal events and child development, taking into account many factors that influence child and family well-being (parental education, mental health, lifestyle, childcare, use of community services and availability of health services). The APrON cohort examines the relationship between maternal nutrient status during pregnancy and maternal mental health, and child health and development. By collecting the same information from two separate cohorts, researchers are comparing variables in both datasets, increasing the sample size for research projects and enabling more complex, longitudinal analyses. Our researchers continue to follow these children and families to build the evidence picture around healthy child development and interventions that can put at-risk children back on track.

Improving the mental health of families at risk. Paramedics, police officers and firefighters have unique occupational stressors and often rely on their families as their first source of support. The Before Operational Stress: Evaluating Novel Psychosocial Interventions for Public Safety Personnel (PSP) and their Families study is evaluating a group-based peer support intervention. This is important work given the additional burden the COVID-19 pandemic has placed on first responders and their families.

Transformative improvement in the prevention, diagnosis and management of youth concussion and injury. Surveillance in High Schools to Reduce Concussions and Consequences of Concussions in Youth (SHRed) is a pan-Canadian high school surveillance program aimed at understanding the prevention, diagnosis,

management and rehabilitation of concussions in youth athletes. This major prospective cohort study, funded by the National Football League Scientific Advisory Board, brings together a multidisciplinary group of researchers working to ensure concussions and injuries are no longer barriers for adolescents participating safely in sports.

Working to Vision Zero: elimination of serious and fatal active transportation injuries in children and youth. The Child Active-Transportation Safety and the Environment Program (CHASE) is a 5-year research program that aims to understand factors in the built environment that make it safer for children and youth who are walking and biking. The program is identifying which features increase the likelihood of children and youth adopting active transportation. This team is working with community partners on an integrated knowledge translation approach to overcome barriers to safe active transportation at municipal, provincial and federal levels.

Maximizing the public health impact of vaccines. Alberta Children's Hospital Infectious Diseases Epidemiology and Vaccine Evaluation (ACHIEVE) researchers are investigating vaccine hesitancy, vaccine effectiveness and dosing schedules. The team is also studying the epidemiology and outcomes of infectious vaccine-preventable diseases. This group's work on prospective, population-based surveillance studies of infectious diseases spans three decades. New studies on the epidemiology,

diagnosis and management of children with COVID-19 represents the marshalling of enormous intellectual resources to protect children and their families from this pandemic. ACHIEVE researchers are sharing rapid, real-time data from across Alberta with national and international partners, contributing to the world-wide scientific effort.

Addressing critical social policy gaps. Canada lags behind other developed countries on measures of child health and wellness. Integrated social policy can address many of the key areas of vulnerability for children and families. Fragmentation in social policies creates barriers to children and families realizing their full potential and this is especially true for children with developmental challenges. The Neurodevelopmental Disability Policy Research Program seeks to address these issues through economic evaluation and policy analysis. This research program contributes timely and important information on social policies and interventions to address gaps with comprehensive evaluation including the use of longitudinal and administrative data.

Research in this program is highlighting evidence-based strategies for preventing serious threats to child and family well-being, and optimizing child health and development. A social determinants of health lens is driving program research activities and contributing to making Canada one of the best countries in the world to live.

DID YOU KNOW
that one in four children in Canada is vulnerable in one or more areas of development prior to entering grade one?

Early life experiences have a vital impact on learning skills, coping skills, resiliency and even our overall health as an adult. Dr. Nicole Letourneau's research provides evidence-based therapies to help families thrive.

Mothers like Lana Clyde understand how important intervention can be. For years, the Calgary mom suffered from post-partum depression. She recovered by enrolling in an intervention program, VIDKIDS,

designed by Dr. Letourneau, PhD, to help mothers fully engage with their children. Dr. Letourneau, along with Dr. Martha Hart, PhD, are also reaching mothers through their program ATTACH™, promoting healthy relationships in families affected by violence, addiction, and low income. The programs build on studies from a unique mother-baby longitudinal cohort at the Owerko Centre. Letourneau holds the ACHF Chair in Parent-Infant Mental Health.

Better Beginnings

Optimizing maternal, fetal, newborn and child health with accurate prediction, prevention and intervention.

Pregnancy is a time of rapid physiologic and social change with long-lasting impacts on maternal and child health outcomes. It is well established that adverse pregnancy outcomes, such as preterm birth or intrauterine growth restriction, can lead to long-term health challenges for the mother and the child, yet collectively we have a limited understanding of why and how these conditions originate. This impedes our ability to predict who is likely to have adverse pregnancy outcomes or prevent them from happening. This grand challenge is focused on improving our understanding of critical developmental, physiological, and social processes and mechanisms leading to typical and atypical development. Ultimately, our knowledge will be applied in laboratory, clinical, and community settings to optimize maternal, fetal, newborn and child health through enhanced prediction and prevention of adverse outcomes.

Better Beginnings

Optimizing maternal, fetal, newborn and child health with accurate prediction, prevention and intervention.

Key areas of investigation

Characterize the mechanisms leading to typical and atypical development. Through fundamental biological studies using human cells and model organisms we aim to better characterize typical development of the placenta, the fetus, and mechanisms leading to childbirth. This fundamental discovery science serves as a platform to identify novel targets for clinical interventions designed to improve outcomes across the life course.

Reducing the burden of preterm birth. Preterm birth is common, affecting 8% of Canadian pregnancies. Children born preterm often suffer from short and long-term health challenges. Recent data also suggests that preterm birth may be an early sign of cardiovascular disease in women. Work in this area encompasses: epidemiologic studies to understand the natural history of spontaneous and iatrogenic preterm birth and its long term impacts on children, mothers, and families; clinical trials of interventions aimed at improving short and long-term outcomes following preterm birth; and knowledge translation activities with AHS to ensure best practices are integrated into the health care system.

Dads make a difference. A father's contribution to healthy pregnancy and child outcomes is much more than DNA. There are sex and gendered responses to child development and child rearing, but most research tends to focus on mother-child interactions instead of mother-father interactions or father-child interactions. This area of investigation aims to help dads by providing education, support, and outreach that is optimized for how men communicate and learn.

Improved maternal mental and physical health. Pregnant women have been systematically excluded from randomized clinical trials for fears of teratogeneity, leading to a dearth of evidence of how to better manage pre-existing and pregnancy-associated conditions with pharmacological, psychological, and surgical techniques. Yet, in the presence of physical illness or mental health concerns, women often face difficult choices with little evidence to support treatment options. Leveraging Alberta's extensive administrative data resources, this work includes phase four surveillance activities examining pregnancy outcomes following medication exposure in pregnancy, as well as phase 1, 2, and 3 clinical trials examining the safety and efficacy of different treatments on pregnancy outcomes and disease control. This work will not only optimize pregnancy outcomes, but also ensure that mothers are healthier long-term.

This grand challenge will generate new knowledge and translate findings into improved mental and physical outcomes for mothers and their children at all stages of development. Researchers on this team conduct interdisciplinary research that spans fundamental science in fetal and placental development, understanding how events during pregnancy impact women and children's health, and strengthening health care systems and communities for improved health and well-being of mothers and children in Canada and abroad.

DID YOU KNOW
that at 6%, Alberta has the second highest incidence of low birth weight in Canada?

Infants born small, relative to gestational age, face increased risk for health challenges, including sudden infant death, diabetes, and heart problems. Low birth weight can occur due to a variety of genetic and environmental factors. Understanding how this happens and why the condition is more prevalent in Alberta is critical to preventing and ameliorating the effects of low birth weight. When she was born at

680 grams, Bella deSouza Cook was one of Alberta's smallest surviving babies. Her doctors didn't think she would live. In neonatal intensive care, her mom enrolled in a ground-breaking maternal-infant study led by Dr. Suzanne Tough, PhD, at the Owerko Centre. Bella is now thriving in her teens and her mom credits her health to early interventions informed by research.

Pushing the Boundaries of Brain & Mental Health

Leading discoveries in brain biology, resilience and new therapies for children, teens and young adults.

Neurodevelopmental and mental health disorders are some of the fastest-growing health problems in the world. More than 20% of school-aged children suffer from a diagnosable disorder, and often have more than one. Developmental, behavioural and emotional problems are now collectively the leading cause of disability affecting our youth. There is an urgent need to devote resources to uncover the developmental and neural origins of these disorders and to develop effective interventions for children, teens, young adults and their families.

The new Centre for Child and Adolescent Mental Health, set to open in 2021, promises to be one of the most research-intensive, community-based mental health care facilities for young people in the country. Our researchers will have access to a direct pipeline from discovery to care – all in one setting. With the addition of this new facility, in partnership with Alberta Health Services, and child and youth serving agencies, we will be able to conduct research that has never before been possible in our community.

Pushing the Boundaries of Brain & Mental Health

Leading discoveries in brain biology, resilience and new therapies for children, teens and young adults.

Key areas of investigation

Stress and brain development. The fetal brain is sensitive to its environment throughout pregnancy; exposures to substances and stress can have long-term impacts on child development. Our teams are studying how prenatal stress influences child brain development across multiple domains, including physiological stress response (cortisol), brain structure and function (via neuroimaging), mental health, and interactions between the brain and the gut microbiome. This cross-disciplinary research is identifying mechanisms underlying the intergenerational transmission of maternal stress to infants/children. This work ultimately supports recommendations for policy changes to optimize child brain development.

Understanding and treating neurodevelopmental disorders. Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by social and communication challenges and restricted, repetitive behaviours. Our researchers study model organisms and research volunteers to identify effective treatments for ASD. Examples include testing the efficacy of the ketogenic diet in mouse models of ASD and in-person therapy to mitigate anxiety in teens with ASD. This research is already impacting young people with ASD and will continue improving their quality of life in the years to come.

The neurodevelopmental basis for mental health. The partnership between the Owerko Centre at ACHRI and the Mathison Centre at HBI provides unique opportunities to determine why a sizable proportion of individuals with neurodevelopmental disorders experience mental health disorders. The expertise of faculty at both Centres, coupled with our partnerships with AHS hospital clinics and community treatment centres, enable our examination of an integrated model to identify key biological, psychological and social mechanisms in mental health issues. Identifying these mechanisms will provide foundational knowledge to develop and implement evidence-based treatment

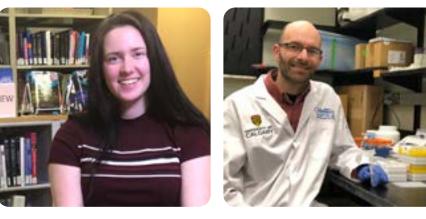and prevention strategies, few of which currently exist.

Understanding circuitry defects of neurodevelopmental disorders. Our researchers are studying the defects in circuitry that occur in neurodevelopmental disorders and therapeutic options to repair them. They are examining neural stem cells, errors driving the timing of neuronal birth and whether they move to an incorrect location, thereby setting up improper circuits at the earliest steps in development. Synaptic physiologists are investigating defects in electrophysiological properties of circuits and associated behavioral defects across a variety of neurodevelopmental disorders. Glial biologists are studying the role of glial cells (astrocytes, oligodendrocytes, microglia) in modulating circuits. Imaging scientists are determining the functional and/ or structural changes in the improperly developing brain in both rodents (where mechanisms can be tested) and in children (where translation can be established). Our stimulation experts are using trans-cranial stimulation to awaken the plasticity of the developing brain to try to modulate these defective

pathways. Finally, clinical researchers are exploring how alterations of these pathways improve behaviors and clinical outcomes in children. This work will clarify the underlying etiology of neurodevelopmental disorders and proposed treatment strategies, across a continuum from early embryogenesis through childhood.

Childhood brain injury. Millions of children experience a traumatic brain injury (TBI) each year, the majority of which are mild. While many children recover within a couple of weeks, up to 25% of children have persistent post-concussive symptoms for months, including somatic, cognitive, and affective complaints. Research is essential to better forecast, prevent, diagnose, and treat mild TBI to improve child outcomes. Our researchers are world leaders in pediatric concussion, covering the spectrum from epidemiology and prevention of mild TBI in children, to animal models of brain injury and large studies of children with mild TBI. This work is already changing policies and will continue to inform policy and practice across Canada and around the world.

This grand challenge will generate new knowledge and translate into improved physical and mental health outcomes for children and youth. Our researchers study brain development, neurodevelopmental and neurological disorders, brain injury, cognition, behaviour, and mental health. This diverse interdisciplinary group spans the full range of translation from bench to backyard, including cutting-edge molecular, genetic, neuroimaging, assessment and intervention techniques, in both model organisms and humans.

DID YOU KNOW
that 1.2 million children and youth in Canada are affected by mental illness—yet, less than 20% will receive appropriate treatment?

Like so many others, Naomi Pearce struggled for months with finding the right medication and proper dosage to treat her depression and anxiety. She eventually needed hospitalization. Her journey reveals the urgent need to better understand the biology of young people and how each responds to anti-depressants. Dr. Chad Bousman, PhD, is

leading Canada's first evidence-based pharmacogenetics testing service aimed at accurately matching an individual's genome to the selection and dosing of medication. This work is tied to the new Centre for Child and Adolescent Mental Health. Today, Naomi is enjoying college life and is encouraged by Dr. Bousman's new research.

Ending the Diagnostic Odyssey

Rapidly deciphering and addressing the genetic origins of disease to optimize tailored treatment.

Patients with undiagnosed disease often face a long diagnostic odyssey that causes significant emotional challenges for children and families, and substantial financial burdens to families and the health care system. Precision Health is driven by the belief that a deep knowledge of individuals and populations allows researchers to drive prevention, early diagnosis and better therapies. Yet despite our significant efforts, many patients remain inadequately or even undiagnosed, resulting in a trial-and-error-based approach to treatment options.

These unresolved cases are a function of two fundamental, inter-related shortfalls in our understanding of disease. Firstly, efforts to identify disease-causing gene mutations have focused almost exclusively on the gene sequence itself, but not its regulatory elements. Indeed, some 90% of genetic diseases are not the result of a mutation in a protein-coding sequence element, but in non-coding stretches of DNA that determine when and where a gene is switched on or off. Secondly, genetic mutations in any given protein commonly manifest in a wide spectrum of disease. As such, it is a challenge to diagnose these diseases as causally related. Inter-individual variation in gene regulatory DNA elements holds the key to this conundrum as it determines how severely a dysfunctional gene impacts health and wellbeing.

Ultimately, improving the health and wellness of patients with undiagnosed diseases requires innovative, multidisciplinary research programs. Diverse teams are essential to major advances in our understanding of early development and disease origin, and the timely translation of novel diagnostic and therapeutic approaches into clinical practice.

This mature program is establishing a basic science – clinical interface where advances built on fundamental research address unmet needs in prevention, patient diagnosis and ultimately treatment. This will be implemented through a precision health approach that integrates world-class biomedical sciences and patient-driven research.

Ending the Diagnostic Odyssey

Rapidly deciphering and addressing the genetic origins of disease to optimize tailored treatments.

Key areas of investigation

Modeling rare diseases. Individually rare, but collectively common, so called "rare diseases" represent a major proportion of the burden of disease in children. Developing effective treatments depends on understanding specific mechanisms of disease. Our MORPH program integrates medical genetics and developmental biology to model and investigate the mechanisms underlying genetic disease in individual patients with unknown genetic diseases.

Rare disease genomics. We partner with centres worldwide and lead initiatives within Canada to discover the genetic causes of rare disease. We are playing key roles in the international effort to reduce the number of children with unknown genetic disease from 50% of cases to zero. To this end, our KidOmics program combines cutting edge genomics with clinical informatics and patient imaging data to study the genetics of rare disease.
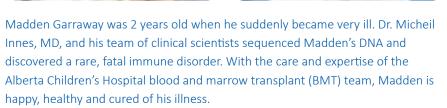
Unravelling the developmental origins of disease. Children with the same mutation often manifest a wide spectrum of disease. Understanding why this happens is important for precision medicine because genomic testing is often used to diagnose and predict disease outcomes. Frequently, however, we are unable to detect mutations in any of the disease-causing genes themselves, pointing to mutations in genomic sequences that regulate these genes. To date, we know very little about the 'regulome' of the genome. To address this knowledge gap, we are integrating whole genome sequencing with analysis of the way DNA is packaged and interpreted (epigenomics and chromatin organization), developmental biology, and advanced imaging to investigate the developmental origins of disease in children.
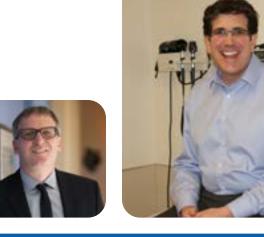
Organoids for all. Understanding the cellular and molecular basis of disease and finding drugs to treat genetic diseases are extraordinarily difficult because of the myriad ways in which gene mutations can disrupt normal development and physiology. Recent advances in cell culture models allow recapitulation of some aspects of organ development in vitro, producing simplified versions of organs known as 'organoids'. These novel methods will hugely accelerate research into developmental origins of disease. They can also help overcome the problem of finding an appropriate drug – as we are able to screen drug effects on cells cultured from patients with a genetic disease. We are developing organoid culture capacities for various organ systems (brain, heart, placenta, liver, gut), applying them to screen treatments for diseases such as epilepsy, and investigating how specific mutations disrupt normal function.

This grand challenge is applying advanced genetic, epigenetic, genomic, and other high-throughput technologies to decipher the molecular and cellular basis of normal development and childhood genetic disorders. Building on our diverse expertise, the overarching goal is a centre of excellence to apply precision medicine to genetic diseases of childhood. This is achieved through cutting edge research using model organisms, advanced cell culture methods, high-level imaging, and bioinformatics. Researchers are leveraging several intercalated initiatives, notably KidOmics and Model Organism Research for Pediatric Health (MORPH), to use fundamental basic research to advance progress across the childhood disease spectrum by rapid translation of lab findings into clinical care.

DID YOU KNOW

that nearly half of all children with a genetic disease never receive a definitive diagnosis?

While most genetic diseases are rare, they are collectively common, affecting 5% of all births and accounting for as much as a third of health care costs for children. A diagnosis is the key to treatment. It is also critical for children and families to access resources and support.

Madden Garraway was 2 years old when he suddenly became very ill. Dr. Micheil Innes, MD, and his team of clinical scientists sequenced Madden's DNA and discovered a rare, fatal immune disorder. With the care and expertise of the Alberta Children's Hospital blood and marrow transplant (BMT) team, Madden is happy, healthy and cured of his illness.

Surviving and Thriving

Reducing the lifelong impact of childhood cancers by advancing precision therapies today and developing new treatments for tomorrow.

Cancer is a leading disease-related cause of death in children and adolescents. About one in 285 children is diagnosed with cancer before their 18th birthday. Although our ability to treat cancer has improved with multi-modality combination therapies, much work remains to be done to improve outcomes for children.

There are many different types of cancer, and they differ from one another. For some cancers, long term survival exceeds 90%. For others the prognosis is grim, with fewer than 1 in 10 surviving more than 5 years. Goals in this field are: to improve the survival of children for whom there is no known therapy, and to provide options for children whose cancers resist current therapies. This research resides at the intersection of fundamental cancer biology, precision oncology, medicinal chemistry, and experimental therapeutics.

Some children whose treatments are successful experience serious adverse effects. For some, the aftereffects are physical and include the development of additional cancers or other debilitating chronic medical conditions. Survivors are also impacted by cognitive, psychological, and social sequelae related to their disease, treatments, and experience. Thus, our research focuses on developing more effective and less toxic therapies, new tools for assessment and interventions focused on survivor health and well-being.

Improving the health and wellness of children and adolescents with cancer requires innovative, multidisciplinary research spanning basic science to clinical research and involving collaborative researchers and expert clinicians. It also requires advance molecular profiling, well-annotated clinical samples, robust experimental models of disease, synthetic biology and cellular engineering tools, detailed longitudinal patient data collection, and the ability to store and integrate complex data. Together, leveraging those resources, we will generate new knowledge and focus that knowledge on improving diagnosis, treatment, and care.

Surviving & Thriving

Reducing the lifelong impact of childhood cancers by advancing precision therapies today and developing new treatments for tomorrow.

Key areas of investigation

Understanding the cellular and molecular basis of childhood cancer. Modern molecular profiling has revealed that childhood cancers frequently harbor DNA, RNA, and protein alterations distinct from alterations seen in adult cancers. Although the cataloguing of such differences is useful for classification, diagnosis, and prognostication, there is still a fundamental gap in our knowledge of what alterations do to drive cancer growth. In this area, we aim to understand the abnormal functions of cancer genes to determine which changes constitute new targets for therapy. We will also examine how multiple abnormalities work together within the cancer cells and how they influence neighboring cells (blood vessels and stromal cells), as well as inflammatory cells to sustain the cancer microenvironment.

Tailoring cancer therapy: The right treatments for the right patients. Cancer therapy involves a range of treatment modalities – from surgery to radiation to cytotoxic chemotherapy to targeted small molecules to cellular therapy. Currently, treatment is assigned according to broad disease types, with some cancers responding and others not. We seek to identify the alterations in childhood cancers that constitute novel targets. Our goal is also to determine whether matching certain drugs or drug combinations to cancers that carry specific molecular profiles can improve responses and decrease adverse effects for children.

This grand challenge aims to improve outcomes for children and adolescents with cancer by understanding the cellular and molecular basis for childhood cancer initiation and progression; matching potential treatments to patients using a precision molecular approach; innovating and testing new immune-based therapies; and measuring comprehensive cancer outcomes.

Developing and testing the therapies of tomorrow: Harnessing the immune system. One promising approach, still in its infancy, is engineering a patient's own immune system to seek out and attack the malignant cells. In this area, we are embarking on an ambitious initiative to develop and test new immune-based therapies for cancer patients. This focused program seeks to: identify novel targets for engineered T-cell therapies and vaccine therapies for high-fatality cancers; develop and test novel immune-based therapies in immune-competent preclinical models; elucidate fundamental interactions between engineered immune cells and host biology; and create a pipeline for clinical trials.

Measuring and improving long-term outcomes. Survival is a key metric. As survival rates improve, our work also seeks to measure and improve upon the well-being of child survivors. This includes comprehensive and long-term follow-up beyond the 5-year mark to understand therapeutic efficacy and late-arising effects. Detailed, longitudinal, cancer cohort data will enable more robust biomarker development, improved risk stratification for late effects, and potential interventions or treatment modifications so that children can survive and thrive.

DID YOU KNOW

that up to 90% of children treated for cancer experience severe or life-threatening complications to their health?

Undergoing current cancer treatments during vulnerable stages of development often leave children with serious long-term side effects, including organ failure, hearing and vision loss, learning impairment, infertility and even secondary cancers. Dr. Faisal Khan, PhD, is leading the development of a prediction tool to reduce the risk of graft versus host disease for children and adolescents requiring bone marrow transplants A genetic test finds optimal matches between donors and recipients, and also identifies children who will require additional care post-transplant.

Precision Child Health

Precision child health is an overall approach that seeks to understand differences among children or populations of children to individualize diagnoses, treatments and interventions. All grand challenges are guided by precision health principles, whether it is genotyping tumours to individualize cancer treatments, developing organoids to screen drugs to treat a rare disease in a specific patient, or stratifying a community by relevant social determinants of health to pinpoint the most appropriate interventions in each setting. Precision health brings a focus to relevant differences among individuals and within populations. It is the opposite of "one-size-fits-all" and represents a transformative shift in child health and wellness world-wide.

Within this precision health framework, we have two cross-cutting approaches:

1. Harnessing big data for optimal child outcomes
2. Transforming health care for children and families

Harnessing big data for optimal child outcomes

In an increasingly data-driven world, data science and artificial intelligence are key tools for converting big data into tangible benefits. Health care is no exception. The wide-spread availability of diagnostic tools and techniques has dramatically increased the amount of medical data for single patients and populations. Deep phenotyping data, including genetics, metabolomics, imaging, and clinical assessments, is now available for many healthy and sick children. However, we are not yet making use of this wealth of information in medicine.

Enormous amounts of data are collected every day in the health care system. At the same time, data science and machine learning methods are increasingly important in all facets of our life. For data science and artificial intelligence to reach their true potential for children and their families, we need to find solutions for legal, ethical, and privacy challenges.

This cross-cutting approach will support the development and implementation of cutting-edge data science methods, including advanced big data machine learning and statistical methods, and foster high-end computational resources to enable precision health for children. Our researchers will collect, analyze, and integrate data from multiple sources to improve prevention, diagnosis, and treatment of pediatric diseases in direct collaboration with clinicians. This team will also enable innovative research to address gaps in knowledge for pediatric diseases.

> Developing and evaluating dedicated data science and machine learning methods to mine big data is a grand challenge that will accelerate precision medicine for children. Harnessing big data will improve disease prevention, diagnosis, and treatment for children in Canada and beyond.
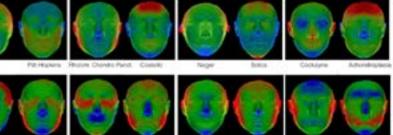
DID YOU KNOW
that most children with rare genetic diseases spend years undergoing medical tests and waiting for a diagnosis?

To reduce the exhausting process that takes such a toll on children and families, Dr. Benedikt Hallgrímsson, PhD and teams from the University of California San Francisco and the University of Colorado have built a database of 3D facial images to identify most of today's genetic syndromes and speed up diagnoses. This transformational prototype will be particularly useful for telemedicine and in low-income countries where genetic testing is not available.

Demonstration Projects

Development of computer-aided diagnosis systems using multiomics data. Diagnosing diseases with high sensitivity and specificity remains a considerable challenge, and this is especially true for rare diseases. Advanced data science and machine learning methods offer the potential to support the diagnosis of diseases based on historical datasets of patients. Therefore, our developing and evaluating advanced diagnosis support systems using multiomics data is a major research aim. Since machine learning models are often considered 'black boxes', developing explainable artificial intelligence models is especially relevant in this context.

Identify disease-specific complex patterns in deep clinical and genomic phenotyping data. Advanced data science and machine learning methods play a major role in combining and analyzing complex multi-dimensional and multi-modal data sources, thereby overcoming traditional silos in medicine and connecting many specialties. Our

researchers will develop and apply dedicated data science and artificial intelligence solutions to analyze disease patterns in historical datasets. They will also incorporate future data acquired from children with various health statuses. This has huge potential to identify novel biomarkers and improve our systemic understanding of diseases.

Implementation of data-driven early warning systems to prevent diseases. Enormous health care data is collected for most children in Canada and stored in a systematic and accessible way. Mining and analyzing this historical data offers the potential to prevent diseases at an early stage by developing dedicated warning systems to alert pediatricians based on individual patient data entered into the electronic health records. Alberta is the optimal place to develop such warning systems due to AHS' centralized system.

Improve algorithms for the analysis of pediatric imaging. Medical images are by far the largest data source in health care today. Due to the high volume and complexity, analyzing medical imaging data is challenging and time-consuming for radiologists and other clinical experts. Developing dedicated image processing and analysis methods, including machine learning models, is especially helpful to alleviate the burden of routine image analysis for physicians, allowing them to focus on complex patients and doctor-patient relationships. They also offer the potential to improve our understanding of diseases through clinical research. Advanced analytics driven by machine learning with medical imaging and other clinical data is expected to become a key tool for delivering precision medicine.

Advancing precision medicine through personalized treatment support by analyzing big data. For many diseases, we have multiple drugs and treatment approaches. Vast amounts of historical data are available from pediatric

patients treated with different drugs and treatment approaches, including treatment outcomes. Mining these datasets offers the potential to select case-specific treatments based on individually-acquired data including imaging, genetics, metabolomics, and clinical assessments.

Develop methods for the responsible and ethical mining of historical health care datasets. A special challenge when training machine learning models and especially deep learning models based on medical data relates to the fact that the training relies on highly private and sensitive patient data. The data used for training machine learning models can include: medical images such as x-rays or magnetic resonance imaging, metadata from electronic health records, clinical assessments, laboratory results, and other variables such as age, sex, and medical history. For this reason, it is imperative we develop dedicated methods to help overcome legal and ethical barriers to share datasets across institutions while protecting patient privacy.

Transforming health care for children and families

Alberta's children deserve comprehensive medical care tailored to their needs (Built4Kids). And yet, there is a lack of evidence specific to children, including limited understanding of disease mechanisms, uncertainty of medication dosing and interactions, few high-level interventional trials and inadequate health care policies for children.

This grand challenge will enable the generation of new knowledge into childhood diseases and translate evidence into action with our partners at AHS to improve outcomes for children and families. Researchers will build and empower multidisciplinary and multi-sectoral collaborations within AHS hospitals, clinics and community settings. We will contribute to the growth of an evolving health care system that engages children, families and health care practitioners- one in which research is embedded in care and connected to advancing evidence-based improvements in health care, health policy, and deeply integrated into Alberta's health system.

> Fostering the creation and implementation of evidence for childhood diseases will result in optimal child health outcomes. Building on our strengths and expanding our partnerships with our provincial health system, our care teams and state-of-the-art technologies, together we will build a bright future for the children of Alberta.

Demonstration Projects

Every Second Counts - Life Saving Care. Trauma, infection, cancer and congenital abnormalities pose significant threats to the lives of Alberta children from birth through adolescence. Integrated acute-care clinical teams (emergency, neonatal- and pediatric- intensive care, neuro-critical care), precision diagnostics and evidence-based interventions significantly alter clinical trajectories during life-threatening illness. Multi-sectoral policy activities enhance our prevention of disease and injury through immunizations and building safe environments. Training our next generation (KidSIM and real-time) and advancing practice for our active clinicians through quality and patient safety initiatives at AHS will optimize patient outcomes when every second counts.

Fighting the Fire – Childhood inflammatory diseases. Inflammation is a central feature of disease in children. Its effects, both acute and chronic, result in dysfunction across organ systems, impacting the quality and trajectory of life for millions of children globally. Building and empowering multidisciplinary collaborations we will expand and enhance biorepositories (ACHRI BioCore) and comprehensive clinical databases. Harnessing the power of a systems biology/precision medicine approach we will generate new knowledge and translate evidence into action, improving diagnostics and clinical interventions for children with inflammatory- and immune- mediated illnesses such as the COVID-related Multisystem Inflammatory

Syndrome of Childhood (MIS-C), Hemolytic Uremic Syndrome (HUS), Kawasaki, Crohn's & Colitis, neuro-vasculitis diseases and post-traumatic inflammation.

Stronger Together – Investing in our stakeholder teams. Enhanced research partnerships with nursing and allied health (respiratory and orthopedic therapy, pharmacy, social work, psychology, child life) at AHS are essential to expand our cross-cutting impact on clinical care. Integrating our patients and families (ACH Family and Child Resource Centre, KidsCan) and cultural leaders (Indigenous and new Canadians) as key stakeholders in clinical research programs will establish innovative, family-centred research partnerships, ensuring what's important to children and families is important to us. Together, we are all building a better future for Alberta's children.

Evidence to Action – Driving clinical trials and translation to practice. Interventional clinical trials generate high-level evidence to answer clinically relevant questions for optimal care. Supported by strong institute infrastructure, our teams will lead local and nationally (tri-council) funded clinical trials, generating new knowledge and transforming pediatric practice. Strong partnerships with quality improvement teams, educators and KT leaders will translate evidence onto the front lines and inform health systems policies.

New models of child health care – harnessing technology for pediatric practice. Innovation through design. We will build and strengthen partnerships with biotech/medical engineering experts across campus, and establish industry partnerships for next-generation technologies. This will improve our capacity for diagnostics (point of care tests, bedside imaging), interventions and daily care for our most vulnerable populations, including children with medical complexity (CMC). Investment in robotics for procedures and patient-provider interactions (Medicine and Engineering Designing Intelligence - MEDI) will transform how we provide care. We will pioneer high-quality, timely access to care through remote IT platforms.

Fostering the creation and implementation of evidence for childhood diseases will result in optimal child health outcomes. Building on our strengths and expanding our partnerships within AHS, our care teams and state-of-the-art technologies, together we will build a bright future for the children of Alberta.

DID YOU KNOW
that arthritis is one of the most common childhood diseases diagnosed in Canada?

Approximately three in 1,000 children live with arthritis, a condition that can too often be devastating. Bob required long-term steroid use to control his disease, leaving him with weight gain, bone loss, high blood pressure, diabetes and mobility issues that required the use of a wheelchair. Dr. Susa Benseler, MD, PhD, and an international network of researchers in childhood arthritis found

that he had elevated levels of IL-1b, a pro-inflammatory cytokine. With a precision medicine approach, Bob's treatment has been tailored to his biological profile. He is in remission, has recovered from the side effects of the steroids and is fully mobile.
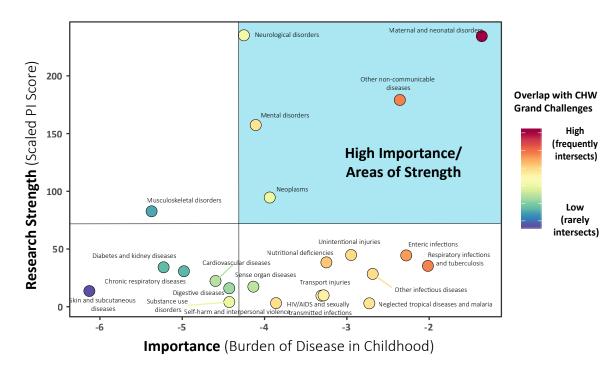
Building the Evidence Base

We have identified and prioritized grand challenges to meet the needs of our communities, enable innovate cross-cutting partnerships and build on our research strengths. Our stakeholder consultation process yielded diverse ideas for grand challenges that coalesce into 45 distinct projects (Child Health and Wellness Strategy, Appendix pages 6-11). To ascertain the overlap between these grand challenges and Global Burden of Disease (GBD) categories, we scored each challenge by its intersection with the 22 level 2 categories in the GBD study for 2017.

To help guide grand challenge areas, we determined the intersection of our research strengths, the strength and needs of our community and the importance of distinct child health areas. Our research strength is quantified as described in the CHW strategy, as the summary variable (PC1) that captures all available measures of productivity and impact. The ambitions and needs of our community were quantified by the intersections between the GBD level 2 categories and the grand challenges articulated through our year-long consultation process.

Many grand challenges overlap with multiple GBD categories and were scored accordingly. Figure 3 shows the results of this analysis. Here, GBD categories are plotted by disease burden and research strength while the points are colored by their intersection with the CHW grand challenges.

BURDEN OF DISEASE IN CHILDREN

Figure 2: Burden of childhood disease.
Source: Global Burden of Disease
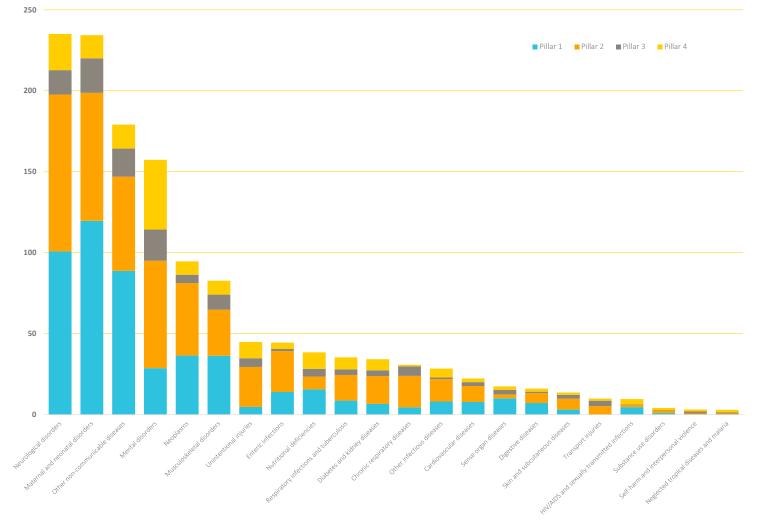*http://www.healthdata.org/gbd*

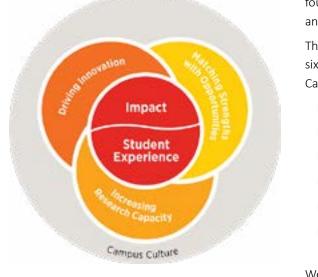*Figure 3: The intersection of importance and research strength.* The X axis plots the GBD burden (on a log scale) for child health while the Y axis plots research strength measured as the number of PIs scaled by research impact and productivity. On this scale, a PI with a research score of 0, counts as 1, while a PI with a research score of 10 counts as 10. The research score is the first PC of publications per year, citations per year, first and senior authorships and journal impact factors.

These categories are shown in Figure 2, ranked by disease burden. We used the average of childhood mortality and disability-adjusted life years, expressed as proportions of the total burden. For example, maternal and neonatal disorders account for roughly 25% of the total disease burden by this measure.

To further examine how areas of research strength coincide with areas of importance for child health, we scored 310 CHW investigators by CIHR pillar. Most of these data were self-reported from ACHRI forms, but some are inferred from publication histories. Many investigators work in more than one pillar and were scored accordingly.

Figure 4 illustrates the results of this analysis and demonstrates that CHW researchers are investigating virtually all GBD disease categories, with research ranging from molecular mechanisms to social determinants of health.

MAPPING OF RESEARCH STRENGTH TO GBD CATEGORIES

The University of Calgary is one of Canada's finest, most innovative universities founded upon and continuously inspired by our entrepreneurial, hard-working and deeply caring community.

The 2017-2022 University of Calgary Strategic Research Plan "Eyes High" identified six research themes that match Strengths with Opportunities, Increase Research Capacity, and Drive Innovation:

- Energy Innovations for Today and Tomorrow
- Engineering Solutions for Health: Biomedical Engineering
- Brain and Mental Health
- Infections, Inflammation and Chronic Diseases in the Changing Environment
- New Earth-Space Technologies
- Human Dynamics in a Changing World: Smart and Secure Cities, Societies, and Culture

We have established an innovative, interdisciplinary community of Child Health and Wellness Scholars across campus and far beyond. Together we will conduct cutting edge research and rapidly translate new knowledge into innovation, disease prevention, health promotion and transformational care initiatives to achieve optimal child and family outcomes in Alberta and beyond. We will embrace and foster partnerships with child and family health care providers of Alberta Health Services as well as child and youth serving organizations in our community - unified in our shared commitment to excellence, compassion and equality. Child Health and Wellness not only aligns well with the six Strategic Research Themes, it will build on those themes to foster unique cross-cutting efforts to match strengths with opportunities, increase research capacity and drive innovation at the University of Calgary.

A limitation: CIHR pillars and GBD categories represent a disease-focused lens. This analytical approach does not substantively address wellness. However, the social determinants of health permeate the global burden of disease, impacting every one of these 22 categories. As such, it is reassuring that CHW investigators are pursuing understanding of these disease-issues through all four pillars of CIHR. That being said, this is a limitation we considered when formulating our overarching CHW strategy and our identified grand challenges. We will continue to address this limitation in consultation with researchers.

Figure 4: Research strength by GBD category broken down by CIHR Pillar.

Learn more about the University of Calgary's
Alberta Children's Hospital Research Institute at
research4kids.ucalgary.ca

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GENERAL FACULTIES COUNCIL EXECUTIVE COMMITTEE
Report to General Faculties Council
for the meeting held September 16, 2020

This report is submitted on behalf of the General Faculties Council (GFC) Executive Committee (EC).

2020-2021 General Faculties Council Executive Committee Work Plan

The EC reviewed its 2020-2021 work plan, made two revisions, and then recommended approval by the General Faculties Council.

Revisions to the Research Ethics Appeal Board Terms of Reference

The EC reviewed the proposed changes to the Research Ethics Appeal Board Terms of Reference. After making one change to the wording relating to diversity, equity and inclusion, to make this more detailed, the EC approved the revisions to the document.

Appointment Work

The EC made nominations for the following elections to be held at the October 8, 2020 GFC meeting:

- Two academic staff members to an Advisory Review Committee for the Dean of the Faculty of Law
- Two academic staff members to an Advisory Selection Committee for a Dean of the Faculty of Veterinary Medicine

The EC appointed Tom Keenan, School of Architecture, Planning and Landscape, as the Research and Scholarship Committee (RSC) member on the Campus and Facilities Development Subcommittee, effective immediately and for a three-year term or until his service on the RSC ends if that is sooner.

The EC appointed three academic staff members to the Academic Program Subcommittee, each for three year terms:

> Ryan Hamilton, Faculty of Science
> Lorelli Nowell, Faculty of Nursing (GFC member at time of appointment)
> Jason Wiens, Faculty of Arts

Academic Staff Criteria and Processes Handbook – Part I

The EC was reminded that the new Academic Staff Criteria and Processes Handbook is comprised of what remains from the Appointment, Promotion and Tenure Manual and General Promotions Committee Manual after the processes related to tenure, promotion and assessment were removed and inserted into the Collective Agreement in 2019. The EC learned that its working group is now bringing forward a first set of Handbook revisions, and that a second set will be brought forward later this year. The proponents noted that the new Handbook includes a preamble, authorities section, and provision for Faculty Guidelines.

The proponents provided an overview of the specific changes being proposed, with emphasis on the content in the section relating to the criteria for research and scholarship, teaching and service.

The EC discussed:

- The requirements relating to recognition

- That some metrics, such as those relating to interdisciplinary work, competitive grant funding, and international recognition, may be challenging for some disciplines and so the "where applicable" words in the Handbook, and especially Section 4.4.3, are appreciated

- That the Faculty Guidelines will provide necessary specificity

- That the references to knowledge engagement, knowledge transfer and community engagement are welcome additions

- The process and factors relating to the transfer between streams

- That the Universal Student Ratings of Instruction (USRI) is no longer specifically named as a tool for teaching evaluation

In response to a question, it was reported that the Faculty Guidelines will be complete by Spring 2021, as these will be developed after the Handbook is fully approved.

The EC suggested that:

- More exemplars of achievement be provided for the instructor stream, as are provided for the professorial stream

- Consideration be given to expanding Section 4.3.2 to include as one of the examples the comparison of a candidate to the top persons in their field

The EC was informed that this item will be discussed at the October 8, 2020 GFC meeting, and then it is expected to return to the EC for recommendation for approval by the GFC at its November 5, 2020 meeting.

Review of the Draft October 8, 2020 GFC Agenda

The EC reviewed the draft agenda for the October 8, 2020 GFC meeting, which will take place via Zoom.

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Prepared by the University Secretariat on behalf of Ed McCauley, Chair and Dru Marshall, Vice-Chair

ACADEMIC PLANNING AND PRIORITIES COMMITTEE
Report to General Faculties Council (GFC)
for the meetings held June 8, 2020; June 22, 2020; July 21, 2020; and September 28, 2020

This report is submitted on behalf of the Academic Planning and Priorities Committee (APPC).

June 8, 2020

Creation of an Embedded Certificate in Entrepreneurial Thinking

The APPC reviewed the proposal, learning that the Haskayne School of Business (HSB) is aiming to define entrepreneurship and entrepreneurial thinking broadly, to support different professions and student passions through work-integrated and experiential learning, and to include every Faculty on campus in the Certificate program.

The APPC learned that the capstone course for the Certificate is a new course, meaning that no students can register for the program and receive the credential on the same day; that students may substitute a pre-approved capstone project in a different Faculty for the HSB capstone course; and that all embedded certificates allow students to receive credit for embedded certificate requirements and major program requirements simultaneously.

The APPC discussed the HSB tuition fee differential, the role of the "faculty coach" in the capstone course; the list of electives and associated Faculty consultations completed to date; the membership of the Hunter Hub academic advisory board; and a future delivery model that includes more online options for University students not living in Calgary.

The APPC suggested that the correct grade scale be incorporated into the capstone course outline and that the Specialist/Advisor who supports the Certificate be included in the membership of the Academic Oversight Committee.

The APPC approved the creation of an Embedded Certificate in Entrepreneurial Thinking.

Creation of an Embedded Certificate in Leadership Studies

The APPC reviewed the proposal, learning that the HSB aims to provide a foundation of effective leadership behaviours and practices, and takes a holistic approach to leadership development that anticipates registrants with professional interests in the for-profit, non-profit, political and social spheres.

The APPC learned that the Specialist/Advisor position that will support the Certificate is not a new role and will be filled by a current staff member, that students in LEAD 401 will learn the science and evidence of mentorship from the instructor of record but will work with mentors external to the University, and that students in LEAD 501 will participate in various mentorship opportunities depending on the course section.

The APPC discussed the lesser value of boiler plate support letters, the distinction between "interdisciplinary" and "multidisciplinary," and the Certificate's focus on multidisciplinary learning opportunities.

The APPC suggested that the Specialist/Advisor who supports the Certificate be included in the membership of the Program Advisory Committee.

The APPC approved the creation of an Embedded Certificate in Leadership Studies.

Creation of a Graduate Certificate, Graduate Diploma and Master of Precision Health

The APPC reviewed the proposal, learning that the proposed programs provide stackable credentials leading to a Master's degree, and that the Cumming School of Medicine (CSM) is creating these programs with an aim to focus the co-production of care (formerly known as patient-centred care) on key precision health principles that utilize new technologies in inquiry, data, critical appraisal and impact and that bring together scientists and clinicians from various healthcare disciplines to practice medicine in innovative ways.

The APPC discussed the general "health-related disciplines" admission requirement, which aims to capture a breadth of different types of learners; experiential learning opportunities offered through the program; the rationale for the establishment of course fees and enrolment targets; and the role of the Academic Director for these programs.

The APPC also discussed the meaning of "disruptive" approaches to healthcare, and the proponents noted that the programs' emphasis on evidence-based care standards aims to disrupt the current provincial healthcare model.

The APPC approved the creation of a Graduate Certificate, Graduate Diploma, and Master of Precision Health.

June 22, 2020

Revisions to Undergraduate Admissions Procedures

The APPC reviewed the proposed changes, which respond to the many changes to secondary and postsecondary grading systems across the country and around the world, and formalize some of the temporary regulations implemented earlier this term by making them permanent to support students who have been impacted by changes to grading practices or the cancellation of examinations in the Winter 2020 term.

The APPC approved the changes to sections A.5 *Undergraduate Admission Requirements* and A.5.3.1 *Transfer Admission Requirements* in the University Calendar.

Suspension of the Master of Disability and Community Studies

The APPC reviewed the proposal, learning that a curriculum review in the CSM revealed that enrolment in the course-based Master of Disability and Community Studies had decreased substantially in the last five to seven years, to such an extent that the program is no longer viable, that no new students have been admitted to the program since 2018, and that the CSM will see all current students through to the end of their program.

The APPC discussed the timeline of the proposed suspension, which will end in June 2023 and which will allow the CSM to re-envision the program and examine how it can be offered in a revised format.

The APPC approved the suspension of the Master of Disability and Community Studies.

Termination of the Specialization in Community Rehabilitation and Disability Studies within the Diploma of the Faculty of Education

The APPC reviewed the proposal, learning that oversight of all Community Rehabilitation and Disability Studies programs was transferred from the Werklund School of Education (WSE) to the CSM many years ago, at which time many programs were implemented, but that this specialization has never been offered by either the CSM or the WSE.

The APPC discussed whether this specialization could become part of the revamped Master of Disability and Community Studies.

The APPC approved the termination of the Specialization in Community Rehabilitation and Disability Studies within the Diploma of the Faculty of Education.

Name Change from the Diploma of the Faculty of Education to the Graduate Diploma in Educational Research

The APPC reviewed the proposal, learning that the name change will remove the antiquated name of the diploma and make it current with the University and the Alberta Credentials Framework.

The APPC approved the name change from Diploma of the Faculty of Education to the Graduate Diploma in Educational Research.

Revisions to the Internship Requirements for Graduate Programs in Educational Psychology, from Courses to Milestones

The APPC reviewed the proposal, learning that under the current structure the Registrar's Office has technical issues recognizing full-year internships, that shifting to a milestone structure will alleviate these issues, and that all requirements for the internship will remain the same.

The APPC discussed the definition of a milestone, where the internship milestone falls in relation to candidacy, and how information relating to the new milestone structure will be communicated to students.

The APPC approved the revisions to the internship requirements for the Specializations in School and Applied Child Psychology and Counselling Psychology within the Doctor of Philosophy in Educational Psychology program.

Revised Assessment Guidelines for Remote and Online Assessments for the Fall 2020 term

The APPC reviewed the proposal, learning that the changes aim to regulate Fall 2020 term assessments in online learning environments and add language to the University Calendar that makes it clear to University students and academic staff what is required of them in online exam settings.

The APPC discussed the 24-hour window of time a student is given to complete a timed online test, assessment, or exam, learning that students may select their start-time within this 24-hour timeframe. The APPC also discussed the requirement to add 50% additional time for any kind of in-class assessment, which has the potential to create time conflicts for students, but learned that the 24-hour window to complete an assessment should allow students enough flexibility to account for this.

The APPC also discussed the existing regulation that stipulates that in-class assessments during the final weeks of class cannot be worth more than 15% of a student's final grade; how these changes will be communicated to students and academic staff; that these changes adhere to state-dependent learning principles; how formal and informal accommodations will be addressed and managed; the creation of an FAQ page, which will include suggestions for faculty members on how to provide structured support during the 24-hour assessment window; and how these changes will be communicated to the Faculty of Graduate Studies (FGS).

The APPC suggested that the proponents clarify that final exams must be completed within the 24-hour window, rather than started; that the proponents add "Winter 2021" to the regulations so that they do not need to return for further approval in the Fall; and that the proponents ensure that graduate students and faculty teaching graduate courses understand that the Graduate Calendar is a chapter of the University Calendar, so these changes will impact graduate courses as well.

The APPC approved the proposed changes to Academic Regulation G. *Examinations and Tests* in the University Calendar, effective for the Fall 2020 and Winter 2021 terms.

July 21, 2020

Technology Requirements for Students taking Online, Remote and Blended Courses

The APPC reviewed the proposal, learning that the outlined technology requirements will modify the Academic Regulation E.1 *Course Outlines* in the University Calendar and provide a list of Technology Requirements for Students Taking Online, Remote and Blended Courses in the Fall 2020 term.

The APPC learned that faculty members will have access to the technological resources needed to deliver their courses successfully; that the use of software and operating systems not provided by the University should be included in the course outline; and that students should be contacting their course instructors to ensure that they have the technologies needed to be successful in their courses.

The APPC discussed the University's device loaner program and how many students took advantage of this when the University first shifted to online delivery of courses; the necessity of a webcam and whether a computer without internet access and a mobile device with a camera may suffice for students who do not have access to a computer with a webcam; and how this information will be communicated to faculty, staff and students.

The APPC suggested that the webcam requirement be broadened to capture built in or external cameras; that it be made clear that tablets and mobile devices may not be sufficient for online, blended and remote learning; that the list of software available to students include the Microsoft Office downloads; and that a footnote be added to encourage students to reach out to their course instructors to confirm which technologies will be required for each course.

The APPC approved the Technology Requirements for Students taking Online, Remote and Blended Courses.

Changes to the Admission Requirements for Graduate Programs in Psychology and Clinical Psychology

The APPC reviewed the proposal, learning that COVID-19 has made access to the Graduate Record Examination (GRE) very difficult, and that by removing the GRE from the list of admission requirements the FGS will be able to remain competitive with other postsecondary institutions in Canada.

The APPC discussed the admissions cycles for the Psychology and Clinical Psychology programs, learning that the

GRE will be waived for all 2021 admissions to these programs. The APPC also learned that the Educational Testing Service has had technical issues offering the GRE during the pandemic and that invigilators are normally required, and that 11 of the 13 postsecondary institutions in Canada that offer these programs have waived the GRE for 2021 admissions.

The APPC approved the changes to the admission requirements for the Master of Science (thesis-based) and Doctor of Philosophy programs in Psychology and Clinical Psychology.

Changes to the Field Work Requirements for the PhD Programs in Anthropology and Archaeology

The APPC reviewed the proposal, learning that the changes aim to make field work requirements more flexible for those students who have begun or will begin their field work between 2019 and 2021, and that COVID-19 is likely to have a significant impact on students' ability to complete field work according to pre-pandemic standards.

The APPC learned that field work requirements would be revised at the discretion of each student's supervisory committee.

The APPC approved the changes to the field work requirements for the Doctor of Philosophy programs in Anthropology and Archaeology.

September 28, 2020

Changes to the Admissions Process for the Doctor of Medicine (MD) Program to add a Black Applicant Admissions Process (BAAP)

The APPC reviewed the proposal, learning that the changes respond to the Black Medical Students' Association's calls to action, that the BAAP allows individuals who are Black or who self-identify as Black to indicate so in their application and have their file reviewed by at least two Black reviewers, and that the MD Admissions Committee will include at least one Black faculty member and one Black student representative.

The APPC learned that the BAAP will bring the University in line with the University of Toronto and other schools with similar applicant streams; that all applicants' files are reviewed holistically to account for any barriers to entry; that the CSM has already implemented the Pathways to Medicine Scholarship program to help remove barriers to entry for under-represented groups in Alberta; that the CSM already evaluates applications holistically; and that all applications are reviewed by at least four individuals. The APPC also learned that the addition of the BAAP does not create a new stream of admission but allows certain individuals to supplement the existing application to the MD program with additional information.

The APPC discussed the possible collective bias resulting from the interview process and learned about increased diversity amongst reviewers in recent years to help mitigate this.

The APPC suggested that Dr. Malinda Smith, Vice-Provost (Equity, Diversity and Inclusion), review the proposed wording for the MD admissions website, documents and the University Calendar entry to ensure it is inclusive of the applicants eligible to apply under the BAAP.

Changes to the Admissions Process for the Juris Doctor (JD) Program to add a Black Student Admissions Process (BSAP)

The APPC reviewed the proposal, learning that the Faculty of Law's JD Admissions process is inherently holistic, that the BSAP will function as an additional tool to engage in the holistic analysis of JD applications, and that Black alumni will be recruited to assess Black applicants to the JD program.

The APPC learned that the Faculty of Law does not collect income data but that some students do address their financial background in their applications; that the Faculty of Law's approach to admissions is different from the norm for Canadian law schools, where others are notably more formulaic in their review of applications; and that the BSAP is not modelled on processes implemented at other Canadian law schools.

The APPC also learned that the Faculty of Law has an Indigenous applicant stream and that the number of Indigenous students in the law school has increased as a result; that the Faculty's primary concern is with recruitment, not admissions; and that the free LSAT prep course already offered in the Faculty reflects the Faculty's efforts to broaden recruitment to disadvantaged groups.

The APPC suggested that Dr. Malinda Smith, Vice-Provost (Equity, Diversity and Inclusion), review the Calendar wording to ensure it is inclusive of the applicants eligible to apply under the BSAP.

Recommendation of the 2020-2021 Academic Planning and Priorities Committee Work Plan

The APPC reviewed its 2020-2021 Work Plan and recommended it for approval by the General Faculties Council.

Quality Assurance Mid-Term Unit Review Report: School of Architecture, Planning and Landscape

The APPC was provided with an overview of the quality assurance unit review process for the School of Architecture, Planning and Landscape (SAPL). The SAPL Dean reported on the progress made on the recommendations from the 2018 unit review.

The Dean and the Provost and Vice-President (Academic) highlighted some of the Faculty's top priorities resulting from the review, including efforts to increase equity, diversity and inclusion in recruitment; the plan to move the entire Faculty to the downtown campus; and engagement with Indigenous students.

The APPC discussed the recommendations and actions, in particular how SAPL is building connections with the Tsuut'ina Nation, how the move to the downtown campus will elevate research output and teaching and learning from a community-engaged learning point of view, and how the Faculty plans to maintain a connection with the main campus in order to successfully recruit undergraduate students.

Prepared by the University Secretariat on behalf of Dru Marshall, Co-Chair, and Tara Beattie, Academic Co-Chair

UNIVERSITY OF CALGARY

RESEARCH AND SCHOLARSHIP COMMITTEE
Report to General Faculties Council
for the meeting held September 17, 2020

This report is submitted on behalf of the Research and Scholarship Committee (RSC).

2020-2021 Research and Scholarship Committee Work Plan

The RSC reviewed its 2020-2021 work plan, and then recommended approval by the General Faculties Council.

Child Health and Wellness Research Strategy

The RSC learned that Child Health and Wellness was selected by the Vice-President (Research) as an emerging cross-cutting research theme of the Research Plan in 2019. The RSC received a presentation on the Child Health and Wellness Research Strategy, which has been developed over the past year, and learned about its community of scholars, priorities, goals, objectives and grand challenges.

The RSC discussed:

- That researchers from a broad range of disciplines, including from the School of Public Policy, are welcome to engage with the initiatives connected with the strategy

- That the tool for evaluating the success and measuring the impacts of the strategy is impressive, and sets out a good process for doing and communicating this

- That the Child Health and Wellness research theme intersects with several of the six established research themes of the Research Plan, and that there will be opportunities to develop new partnerships and engagement

- The term "adverse childhood experiences", and that this includes childhood emotional trauma and childhood sexual trauma

- That funding can be leveraged in order to grow scholarship, including internationally

Eyes High Postdoctoral Match-Funding Program

The RSC received a presentation on the Eyes High Postdoctoral Match-Funding Program, which is an evolution of the original 2014-2019 program made necessary by current budgetary restraints. The RSC learned that the new program will provide partial salary support to enable faculty to support postdoctoral scholars who will be competitive for external funding.

In response to questions, the RSC learned:

- That the postdoctoral scholars funded through this program are intended to be new to the University, but that some exceptions may be made

- That while the postdoctoral scholars are required to apply for all external awards and grants that they are eligible for, and that this could take significant time, these competitions take place every six months

- That early career supervisors will be considered for funding as well as long-term supervisors

- That supervisors can work together and combine funds in order to provide the other half of the postdoctoral scholar's salary and apply to the program

VPR Catalyst Grants Program

The RSC received a presentation on the Catalyst Grants Program, which is a new internal stimulus grant program recently launched by the Vice-President (Research), and which replaces the University Research Grants Committee (URGC) seed funding programs. The RSC learned that the program will award funds to be leveraged to secure substantial external funding for a project, and that there will be four competitions per year.

In response to questions, the RSC learned:

- That the Catalyst Grants Program is for all disciplines

- That the external funding does not have to be Tri-Council funding

- That the University has another program, UCeed, that is a seed funding program to support innovation, commercialization of new technologies, and the acceleration of University startup companies

Research Management System – Tri-Agency Programs Implementation

The RSC received a presentation on the recent Research Management System (RMS) launch phase that will be used to manage Tri-Council and other applications this fall. The RSC learned that the RMS process includes pre-award and post-award components, that the University's Research Services Office has internal deadlines in order to allow for the review of applications and the obtaining of signatures, and that training is available for persons new to the RMS system.

Prepared by the University Secretariat on behalf of Robert Thompson, Co-Chair and Andy Knight, Academic Co-Chair

TEACHING AND LEARNING COMMITTEE
Report to General Faculties Council
for the meeting held September 15, 2020

This report is submitted on behalf of the Teaching and Learning Committee (TLC).

2020-2021 Teaching and Learning Committee (TLC) Work Plan

The TLC reviewed its 2020-2021 work plan, made one revision, and then recommended approval by the General Faculties Council.

Non-Material Revisions to the TLC Terms of Reference

The TLC reviewed a proposal to revise the wording in its Terms of Reference relating to the non-voting seat of the Vice-Provost and Dean of Graduate Studies, to provide for the Dean to appoint a member of the Faculty of Graduate Studies (FGS) Council to serve in their place, rather than only an Associate Dean of the Faculty. The TLC learned that the Faculty has a limited number of Associate Deans, all of whom have a high service load, and that this change will allow the Dean to choose an individual who is a good fit for the TLC.

The TLC discussed other changes that could be made to its membership, including adding additional voting members. Following discussion it was decided that, in addition to the original proposal regarding the FGS Dean's seat, only the updating of the titles of two of the non-voting members would be done at this time.

The TLC then approved the revisions to its Terms of Reference, as set out in the document provided to the TLC and as decided during the meeting. The TLC was reminded that the document would be provided to the General Faculties Council (GFC) for information only, as the TLC has the authority to make non-material changes to its Terms of Reference.

COVID-19 Updates in Teaching and Learning

The TLC engaged in a discussion about the members' experiences in the months since COVID-19 changed operations, including the impacts of child care responsibilities, learning how to utilize Zoom effectively, and achieving student engagement. The TLC also discussed risks to the University, such as negative narratives relating to teaching quality and the ability for students to commit academic misconduct during remote learning.

The TLC noted that communication is important. Examples of what the University is doing well should be shared, and the resources available to the campus community, such as assistance with technology and mentoring, need to be advertised broadly.

The TLC discussed that, as some classes return to in-person learning, some students may not be willing to come to campus. Immunocompromised students will need to be accommodated, and some students could choose to delay the completion of their programs. The TLC heard examples of successful in-person learning, which involve distancing, breaking the students into smaller groups, providing masks and sanitizer, and hybrid models of course delivery.

Assessment Guidelines for Remote and Online Assessments for the Fall 2020 Term

The TLC learned that revisions to Section G of the University Calendar (Examinations and Tests) were made over the summer, to include regulations for the assessment of students in courses being delivered in online, remote, and blended formats in the Fall 2020 term.

The TLC discussed that there is some confusion and concern regarding the regulations that "*Students must have the option to start a test or timed assessment at a time that best suits their situation within a 24-hour time period*" and "*Tests and timed assessments must be set up to include an additional time extension of 50 per cent of the test/assessment duration to allow for any technology issues that may arise*", and the TLC suggested that guidelines relating to these are needed. The TLC also discussed that not all exams are administered within the Desire2Learn (D2L) platform.

USRI Working Group Update

The TLC received an update on the work of the Universal Student Ratings of Instruction (USRI) Working Group, and learned that consultation meetings have occurred and the feedback gathered from these is being compiled, and that a survey will go to the campus community in the fall. The TLC was reminded that the USRI Working Group will develop recommendations that will be brought to the TLC and GFC in due course.

Standing Reports

The TLC received reports on the current initiatives of the Taylor Institute, Students' Union, and Graduate Students' Association.

Prepared by the University Secretariat on behalf of Leslie Reid, Co-Chair, and Amy Warren, Academic Co-Chair

Senate Report for General Faculties Council

Meeting date: 22 September 2020
Report prepared and submitted by: Sarah Elaine Eaton, GFC Elected Representative
4:00 p.m. – 6:00 p.m.

1. Welcome.

2. Approval of the agenda.

3. Consent agenda and approval of the meeting minutes of April 23, 2020.

4. Lecture of a Lifetime Speaker Selection Principles and Evaluation Guide.

5. Lecture of a Lifetime Speaker Selection Process.

   Items 4 and 5 were discussed together. These documents provide clear processes and principles to guide the selection of the individual who will deliver the annual Lecture of a Lifetime. The process currently used has been somewhat ad hoc. These documents provide consistency, transparency, and clarity around how the process will work and what the criteria are. Both motions were carried.

6. Remarks of the Chancellor

   Deborah Yedlin welcomed everyone back to the Senate for the new academic year. In her remarks she commented on geo-political events occurring globally, the coronavirus pandemic and the importance of the university during these times.

7. Remarks of the Vice Chancellor and President

   Dr. Ed McCauley built on the remarks of the Chancellor by commenting on how the university has responded during the COVID-19 crisis, the impact of the provincial budget on the university and how the university is actively responding to both of these, while maintaining its commitment to students and growth through focus.

8. Introduction of Senate Standing Committees

   2020-21 Senate Standing Committee Chairs, Vice Chairs and general membership were discussed. The Chairs of various standing committees were presented, with each offering brief remarks:

   - Senator Development (Chair: Wesley Ernst)
   - Community Engagement (Aaron Park)
   - Communications (Mark Salkeld)
   - Honours (Diane Field)

- Honorary Degree sub-committee (Gjis van Roojen)
- Order of the University of Calgary (OTUC) sub-committee (Miriam Berchuk)

9. Formation of new working groups

Two new ad hoc working groups will be formed this year, with a few to them becoming standing committees in the future:

- Ad hoc Governance Review committee – To review existing governance structures, making recommendations for improvements where needed.
- Equity, Diversity, and Inclusion (EDI) committee – To address matters relating to EDI within the Senate itself.

10. Other business and round table – No items brought forward.

11. Break

12. Presentation: Community Engagement – Kristin Anderson, AVP, Community Engagement Overview of how community engagement has moved into a virtual space over the past six months since the University changed how it operated in response to the COVID-19 crisis. Emphasis was on the continued importance of community engagement and the role Senate plays in that.

13. Q&A – A number of questions arose from the presentation touching upon topics such as athletics and how the university could better leverage its strengths.

14. Adjournment – Meeting adjourned at 6:10 p.m.

POLICY DEVELOPMENT PLAN (PDP) REPORT

as of 2020-09-28

Below is a list of all University Policies and Procedures currently in Consultation or recently Approved by the applicable Approval Authority.

Title	Stage	Drafting Team
Sexual Violence Policy	Consultation	Deborah Book; Carla Bertsch; Susan Barker; Michael Van Hee; Chris Stanley;

SUBJECT: **Revised Teaching and Learning Committee Terms of Reference**

PROPONENT(S)

Leslie Reid, Co-Chair of the Teaching and Learning Committee (TLC), and Robin Yates, Dean and Vice-Provost (Graduate Studies).

PURPOSE

To inform the General Faculties Council that the TLC approved the following revisions to the non-voting membership section of the TLC Terms of Reference: "*Vice-Provost ~~(Graduate Education)~~ and Dean of ~~the Faculty of~~ Graduate Studies or, in the Dean's sole discretion, ~~an Assistant Dean~~ a member of the Faculty of Graduate Studies Council (ex-officio)*". The TLC also updated the Terms of Reference to reflect the current titles of two of its non-voting members.

KEY POINTS

The revisions update the Dean's title and provide the Dean with greater flexibility in appointing a delegate to serve on the TLC in their place.

The Faculty of Graduate Studies (FGS) has a limited number of Associate Deans, all of whom have a high service load, and being able to appoint a member of the FGS Council to the TLC in the Dean's place will allow the Dean to choose an individual who is a good match for the committee from a skills and experience perspective, and who is able to commit the appropriate time to the committee.

These revisions are considered non-material and the General Faculties Council Standing Committees General Terms of Reference provides that the Committee can approve "*Non-material amendments and corrections*" that are then reported to the General Faculties Council.

ROUTING AND PERSONS CONSULTED

Progress	Body	Date	Approval	Recommendation	Discussion	Information
	Teaching and Learning Committee	2020-09-15	X			
X	General Faculties Council	2020-10-08				X

NEXT STEPS

The approved TLC Terms of Reference are now in effect.

SUPPORTING MATERIALS

TLC Terms of Reference, marked up to indicate the revisions.

General Faculties Council
Teaching and Learning Committee
Terms of Reference

1.   ESTABLISHMENT

The General Faculties Council (**GFC**) hereby establishes a standing committee called the Teaching and Learning Committee (the **Committee**) under the provisions of the GFC's General Terms of Reference for Standing Committees and these Terms of Reference, and delegates to the Committee the authorities set out herein. In the event of a conflict between the provisions of these Committee Terms of Reference and the General Terms of Reference, these Committee Terms of Reference will govern.

The Vice-Provost (Teaching and Learning) shall act as the responsible senior administrator to the Committee, providing the link between senior administration and the Committee.

2.   MEMBERSHIP

Co-Chair

Vice-Provost (Teaching and Learning) (ex-officio, voting).

Academic Co-Chair

As named by the GFC Executive Committee (see "Voting Members" below).

Voting Members

- One academic staff member appointed by each Faculty Council, excluding Graduate Studies and Qatar. One of these persons shall be named by the GFC Executive Committee as the Academic Co-Chair of the Committee.
- One person appointed by the Libraries and Cultural Resources Academic Council
- One Dean appointed by Deans' Council
- One student appointed by the Students' Union
- One student appointed by the Graduate Students' Association

Non-Voting Members

- Vice-Provost ~~(Graduate Education)~~ and Dean of ~~the Faculty of~~ Graduate Studies or, in the Dean's sole discretion, ~~an Assistant Dean~~a member of the Faculty of Graduate Studies Council (ex-officio)
- Vice-Provost (Student Experience) (ex-officio)
- Vice-Provost (Libraries and Cultural Resources) and University Librarian (ex-officio)
- Chief Information Officer (ex-officio)
- ~~Director of the~~ Educational Development ~~Unit, Taylor Institute for Teaching and~~Consultant and Academic Lead, Learning Technologies and Design Team (ex-officio)
- ~~University Chair in Teaching and Learning and Academic~~Senior Director of the Taylor Institute for Teaching and Learning (ex-officio)
- One person appointed by the Faculty Association

- One person appointed by the Alberta Union of Provincial Employees, Local 52
- One person appointed by the Management and Professional Staff Executive Committee

3.   ROLE

The Committee serves as GFC's primary advisory group on teaching and learning, including such aspects as learning environments, quality and innovation, resources and support, recognition of teaching excellence and professional development, and students' educational experience.

4.   RESPONSIBILITIES

The Committee will fulfill its role primarily by carrying out the activities enumerated below.

The listed responsibilities shall be the common, recurring activities of the Committee; however, the Committee may carry out additional responsibilities and duties within its role.

The Committee's primary responsibilities are as follows:

1. Provide strategic advice to GFC on teaching and learning in support of sustained, high academic standards, academic integrity and the strategic directions of the University;

2. Identify and develop or review and recommend to GFC strategies, plans, policies, procedures, practices, programs and activities within its role and advise GFC on the implementation and outcomes, including the effectiveness, of same;

3. Identify, prioritize and recommend action for dealing with issues that arise from across the University falling within its role;

4. Seek out, promote and support innovations in teaching and learning, including monitoring the evolution of learning technology applications and their impact on teaching and learning, and identifying and encouraging the adoption of new learning modes, strategies and learning technology applications;

5. Promote research on the effectiveness and evaluation of teaching and learning and develop and recommend methods of assessing the quality of all teaching activities;

6. Facilitate teaching and learning initiatives being developed or utilized within and between divisions and disciplines, encourage collaborative activities and seek avenues for support of multi-disciplinary teaching developments;

7. Lead and promote communication and discussion about teaching and learning across the University and develop, promote and review a communication strategy for knowledge mobilization of issues and information about teaching and learning;

8. Support and foster the professional development of teaching staff, promote and make recommendations for faculty development that meets the needs of faculty, and identify, promote and support opportunities for educational scholarship for faculty and staff;

9. Develop, review and recommend to GFC teaching awards programs;

10. Receive reports about student engagement and the student educational experience, and make recommendations to GFC concerning same;

11. Identify and recommend institutional priorities for University teaching and learning resources and support services;

12. Carry out those responsibilities under the University's Enterprise Risk Management program that are assigned to the Committee by the GFC Executive Committee;

13. Provide a forum for the receipt of reports from University teaching and learning resources, such as Libraries and Cultural Resources, the bookstore and student ombudsperson, and to allow these resources to raise issues and receive advice, support and promotion from the Committee; and

14. Such other activities and responsibilities delegated or assigned to it by GFC or the GFC Executive Committee from time to time.

The Committee is also ultimately responsible for the work and responsibilities of each of its sub-committees as articulated in the terms of reference of those committees.

5.   POWERS

Other than, or in the absence of, specific delegations of authority from GFC or the GFC Executive Committee to act autonomously, the Committee's powers shall be limited to providing input and ideas, advising and making recommendations to GFC and other GFC standing committees.

6.   AUTHORITIES

The Committee has the specific delegated authority to act autonomously as described below, on the condition that decisions made or actions taken under this delegated authority are reported to GFC.

None at this time.

As at September ~~29, 2015~~15, 2020

GENERAL FACULTIES COUNCIL
INFORMATION BRIEFING NOTE

SUBJECT: Revised Research Ethics Appeal Board Terms of Reference

PROPONENT(S)

Robert Thompson, Associate Vice-President (Research)

PURPOSE

To inform the General Faculties Council (GFC) that the GFC Executive Committee (EC) approved revisions to the Research Ethics Appeal Board (REAB) Terms of Reference (ToR), as it was identified in May 2020 that the REAB ToR does not set a length of term for the REAB Chair and does not speak to the desirability of diversity.

KEY POINTS

The following revisions were approved:

1. the addition of a fixed term length (3 years) for the REAB Chair (renewable)
2. the addition of standard equity, diversity and inclusion (EDI) language for the REAB Committee membership (when formed)
3. minor editorial changes

Disagreement between a researcher and the Research Ethics Board (REB) over a decision that cannot be resolved through discussion and reconsideration can be resolved through the REAB appeal process.

The GFC created the REAB on June 5, 2003. The EC has the responsibility to approve the terms of reference of any group over which the GFC has authority.

ROUTING AND PERSONS CONSULTED

Progress	Body	Date	Approval	Recommendation	Discussion	Information
	GFC Executive Committee	2020-09-16	X			
X	General Faculties Council	2020-10-08				X

Additional individuals consulted:
- Chris Sears, Professor, Department of Psychology and REAB Chair
- Stacey Page, Chair, Conjoint Health Research Ethics Board (CHREB)
- Jenny Godley, Chair, Conjoint Faculties Research Ethics Board (CFREB)

NEXT STEPS

The approved REAB Terms of Reference are now in effect.

SUPPORTING MATERIALS

Research Ethics Appeal Board Terms of Reference, marked up to indicate revisions and clean copy

TERMS OF REFERENCE

Purpose

Upon appropriate justification, the Research Ethics Appeal Board (REAB) will review and reconsider decisions made by the University of Calgary's two research ethics boards (REBs): the Conjoint Faculties Research Ethics Board and the Conjoint Health Research Ethics Board (except where appeals must be made to a Health Information Act Designated REAB). The REAB will also act ~~at~~as the appeal board for the review of ethics decisions from institutions that have contracted with the University of Calgary to use the REAB for appeals.

The REAB operates in accordance with the current Tri-Council Policy Statement (TCPS).

Jurisdiction

Researchers have the right to request an appeal of a REB decision, when, after reconsideration, the REB has refused to approve an ethics application~~.~~ or has provided approval conditional on revisions that the researcher believes will compromise the feasibility or integrity of the proposed research. Researchers and the REB must have fully exhausted the reconsideration process, and the REB must have issued a final decision before an appeal can be initiated. The appeal process is not a substitute for REBs and researchers working together to find solutions for issues with an ethics application, nor is it a forum for seeking a second opinion. An appeal can be launched based on procedural grounds (e.g., alleged noncompliance with the REB's terms of reference or procedures) or substantive grounds (e.g., alleged noncompliance with a specific article of the TCPS). Dissatisfaction with a REB decision is not a sufficient ground for appeal. The onus is on researchers to justify in writing the ground(s) for requesting an appeal.

The REAB has the authority to review a REB decision. In so doing, it may uphold the REB decision, reject the REB decision, or issue approval of a version of the application that has been appropriately modified by the researchers subject to the limits and/or modifications specified by the REAB. The REB will manage applications once approved. The REAB's decision on behalf of the institution is final.

The REAB shall develop procedures governing the conduct of its hearings, which shall be in accordance with principles of natural and procedural justice, the current TCPS, the Collective Agreement, and other relevant University agreements. The REAB procedures are subject to review by the Office of the Vice-President (Research).

Membership

- A Chair, knowledgeable in research ethics, to be appointed by the General Faculties Council (GFC) ~~Steering~~Executive Committee, on the recommendation of the Vice-President (Research). The Chair shall serve a three-year term, renewable.

- If there are *prima facie* grounds for an appeal as outlined in the Jurisdiction section, the REAB Chair shall establish an ad hoc appeal committee appropriate to the research under consideration and consistent with ~~TCPS requirements and~~ other relevant regulatory documents. Membership (when formed) should reflect a range of expertise, knowledge similar to that of the REB, and diversity, including equity-seeking groups (e.g., women, racialized minorities, Indigenous peoples, persons with disabilities, and persons from LGBTQ2+ communities). TUCFA may appoint one non-voting member. Current REB members whose decision is under appeal cannot serve on the appeal committee.

Duties

- To serve as the University's final independent decision-making body with regard to appeals in the area of research ethics.

- To inform the Vice-President (Research) when an appeal has been received.

- To report in writing (in print or by electronic means) the decision of the REAB to the appellant, the Vice-President (Research), and the Chair of the relevant REB.

Approved by the GFC Executive Committee, 2020-09-16

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