

Advancing Lifelong Health for All

A concept paper created through the University of Victoria
Health Sciences Initiative

November 2019



University
of Victoria



Introduction

The Health Sciences Initiative (HSI) is a joint activity of the Offices of the Vice-President Academic and Provost and the Vice-President Research at the University of Victoria (UVic). The primary goal of the initiative is to enhance the quality and raise the profile of health-related research, academic programs and related activities at UVic.

This initiative is particularly timely because UVic currently suffers from a lack of external recognition in the context of its research enterprise. A clear example of this is the fact that our international rankings and reputation do not currently reflect the strength of our research outcomes. Although many of our faculty and students do important work and publish extensively, we are not known nationally or internationally for having research strengths in particular areas and this hurts our external reputation. To overcome this challenge, we need to be intentional about developing and raising our profile in a few priority areas where we have the capacity and expertise to do so. One such area is health.

Why is health an area of focus? There are several compelling reasons. Many of the toughest global challenges we face are related to some aspect of health or wellbeing, so having a strong research and programmatic presence in this area will ensure that UVic is contributing to global issues in a meaningful way. Health-related activities are also prestigious: All the top universities in the world have strong health enterprises across a broad range of fields, from medicine and biosciences to health ethics, environmental health, philosophy of health and disease to addressing mental health through the arts. The presence of such activities is a strong focus for attracting excellent faculty and students. And finally, health research brings in considerable resources that can benefit the entire university. The average CIHR five-year project scheme grant is almost five times larger than the average five-year NSERC Discovery grant. Building capacity in health research will significantly enhance UVic's Tri-Agency revenues, which not only benefits our researchers, but also provides indirect benefits to the institution through increased funding envelopes for the Canada Foundation for Innovation (CFI), the Canada Research Chairs (CRC) program, the Research Support Fund (e.g. indirect costs) and graduate student scholarships in all areas of research.

This concept paper includes a set of recommendations and ideas outlining our intention to move forward. It is both a roadmap and the start of a conversation about where we can go, and importantly, how and when we can get there.

Some of the strategies proposed in this paper will be relatively easy to implement, whereas others will require more thought and careful planning. Achieving high-quality outcomes and impacts from this initiative will require a sustained, collective effort and an institutional desire to deliver on our outstanding potential in this globally relevant area of activity.

Alignment with university goals

The HSI is an important start for elevating our place in the top tier of the world's research universities and being Canada's leader in research-enriched and experiential learning. It will position UVic as a centre for high-impact health research and programming.

UVic has approximately 200 faculty members currently engaged in health-related research and teaching, with existing strengths in aging, cancer, health informatics, healthy equity, mental health, neuroscience, social dimensions of health and substance use—as well as many other emerging areas of excellence. As the HSI has unfolded, we have considered how we can both bring together and invest in such expertise to achieve maximum impact and further advance our global prominence.

UVic's Strategic Framework identifies six strategic priorities for the university: cultivate an extraordinary academic environment; advance research excellence and impact; intensify dynamic learning; foster

respect and reconciliation; promote sustainable futures; and engage locally and globally. The HSI includes activities that will help UVic deliver on each of these priorities, thereby contributing to our high-reaching institutional goals.

The expected outcomes from this initiative include more collaborative partnerships and interdisciplinary approaches to both research and academic programs, working on campus and with our external colleagues and partners. Success in these outcomes will contribute to improving our external rankings and reputation, which will better position us to recruit and support a diverse and talented community of health researchers, post-doctoral fellows and students.

Background and consultation

Following initial planning, development and consultation with senior leaders, an advisory group was formed in fall 2018 to advance the work. Members of the advisory group included faculty and thought leaders from various areas across campus, selected for their expertise and institutional experience with health research and programming:

- Dr. Lisa Kalynchuk* - Associate Vice-President Research (co-chair)
- Tony Eder - Executive Director, Academic Resource Planning (co-chair)
- Dr. Alexandre Brolo - Professor, Department of Chemistry and Director, Centre for Advanced Material and Related Technology
- Dr. Caroline Cameron - Professor, Department of Biochemistry and Microbiology
- Dr. Nikolai Dechev - Acting Chair and Associate Professor, Department of Mechanical Engineering
- Dr. Chris Goto-Jones - Dean, Faculty of Humanities
- Dr. Scott Hofer - Professor, Department of Psychology and Director, Institute on Aging and Lifelong Health
- Dr. Francis Lau - Professor, School of Health Information Science
- Dr. Charlotte Loppie - Professor, School of Public Health and Social Policy
- Dr. Michael Masson ** - Associate Dean Research, Faculty of Social Sciences
- Dr. Ryan Rhodes - Professor, School of Exercise Science, Physical and Health Education
- Robin Syme - Director, CanAssist
- Dr. Karen Urbanoski - Assistant Professor, School of Public Health and Social Policy
- Jennifer Vornbrock - Executive Director, Community and Government Relations
- Dr. Bruce Wright - Head, Division of Medical Sciences

*Dr. Kalynchuk was appointed Vice-President Research, effective July 1, 2019

**Dr. Masson was appointed Acting Associate Vice-President Research, effective August 1, 2019

The committee was supported by Andrea Knittig, Sally Lin, Ased Said, Lindsay Gagel and Dr. Kaitlyn Roland.

Through bi-weekly meetings and a highly consultative process—which included three town halls; two discussions with deans, associate deans and research centre directors; meetings with department chairs and school directors; a faculty survey; and conversations and site visits with partner institutions—the advisory group developed a set of evidence-based recommendations and strategies for health-related activities at UVic, as described in this concept paper. See [Appendix A](#) for a visual showing the timeline and scope of these consultations.

The consultations revealed an appetite for aspirational goals that can position UVic to achieve prominence in signature areas of research and education while supporting excellence across broad areas of activity. We will achieve this by investing in people, activities and spaces to create the right conditions for success. This includes supporting faculty and trainees doing research, providing more pre- and post-

award grant support, investing in research clusters and novel ideas, planning for new state-of-the-art facilities, and seeking alternative sources of revenue. We can diversify our research income by taking advantage of opportunities from national and international granting agencies, foundations, industry and external partnerships, and being intentional about the way we approach donors for support.

Although UVic has longstanding and widespread expertise in health-related research and programming, existing silos are seen as a barrier to the kind of collaboration required to produce impactful outcomes. UVic has a greater potential for interdisciplinary interactions and partnerships, and disciplines themselves need amplified space to support research and academic excellence. Excellence will emerge when we combine multiple skills and types of expertise to tackle major health challenges. We will explore opportunities to break down historic silos to enhance interdisciplinary and innovative health research.

The consultations also highlighted the importance of recognizing success, and identifying research outcomes that extend beyond traditional metrics—such as publications—to include activities and products that enhance social justice, promote health equity, inform policy-making and improve patient care. Other valued outcomes include new technologies and intellectual property, industry partnerships, trainee success and new connections with external communities.

Finally, we heard that partner institutions are eager to work with us to achieve outcomes that will benefit British Columbia and beyond. There are exciting opportunities ahead for us to collaborate with the other research-intensive universities in BC, and the provincial government is eager to see us do so. The BC Digital Technology Supercluster provides a key opportunity to leverage research funds and advance new ideas in collaboration with industry, as precision health is an important foundational area for investment within the supercluster. Health authorities across the province are keen to increase research capacity and to facilitate clinical and translational research efforts that will improve patient care. Importantly, our partnership opportunities are not limited to health research: we heard from our consultations that our current partnership with the University of British Columbia (UBC) to deliver the Island Medical Program (IMP) could be a model for new health sciences programming in the near future, and there may be ways to integrate some MD students and medical residents into UVic graduate programs. In sum, we heard that we have a lot to offer our partners and we can benefit from nurturing and growing these relationships in ways that support our goals and aspirations.

Methodology

The advisory group recommendations are organized within four pillars:

1. Research
2. Programs
3. Structures
4. Space and infrastructure

The pillars are interwoven together to advance the overall goal of the Health Sciences Initiative while also aligning with UVic's Strategic Framework, Strategic Research Plan, Indigenous Plan, International Plan, Strategic Enrolment Management Plan, and the Global Reputation and Rankings Project. The recommendations contained within each pillar are separated into three timelines: short-term (1-2 years from now); medium-term (3-5 years); and long-term (6-10 years)—recognizing the need for flexibility in our implementation and consultations when necessary.

The research pillar

The research pillar focuses on our high-quality research to consider how we can build a cohesive health identity and enhance the research performance and reputation of the university. Potential outcomes include better support for faculty and researchers, improved grant success, attracting alternative

research revenues and the diversification of funding opportunities, and increased external recognition and appreciation of the high-quality outcomes produced by our researchers.

This pillar also recognizes and values what we heard on diverse outputs, such as publications, new technologies, intellectual property, industry and community partnerships, trainee success, policy changes, enhanced patient care, social justice and health equity.

Under the umbrella theme of “**Advancing lifelong health for all**”—defined as the combination of diverse approaches and tools to optimize individual and community health and wellness across the lifespan—we have identified four signature areas where UVic has the strength, capacity, and aspiration to deliver research outcomes that are internationally relevant and competitive. These are also areas where UVic can build and strengthen external partnerships to meet the health needs of British Columbians and beyond. The four signature areas are shown in the middle ring of our research visual (*Figure 1*) and defined below.

Healthy Aging: To understand the intrinsic capacity of individuals and relevant environmental characteristics that enable health and well-being with advanced age. A key support for this research area is UVic’s Institute on Aging and Lifelong Health (IALH).

Indigenous Health: To partner with Indigenous Peoples to build on their strengths and support well-being. This signature area will be defined in consultation with community elders and other leaders, UVic Indigenous scholars, and external stakeholders such as the First Nations Health Authority (FNHA). UVic’s Centre for Indigenous Research and Community-Led Engagement (CIRCLE) will be a focal point for this area. A new centre on Indigenous Art and Reconciliation is in the planning stage.

Mental Health: To promote psychological, emotional and societal well-being so that individuals can cope with the stresses of life. This area includes research on mental disorders, coping strategies, substance use, marginalized populations, social justice and health equity. UVic’s Canadian Institute for Substance Use Research (CISUR) is an important asset to our engagement in this area.

Translational Medicine: To understand the pathways that shape disease development and implement novel therapeutic strategies for preventing and treating diseases. The Proteomics Centre and the Centre for Advanced Materials and Related Technologies (CAMTEC) provide key platforms for research in this area. Strategic reorganization of UVic’s Centre for Biomedical Research (CBR) will further support this research.

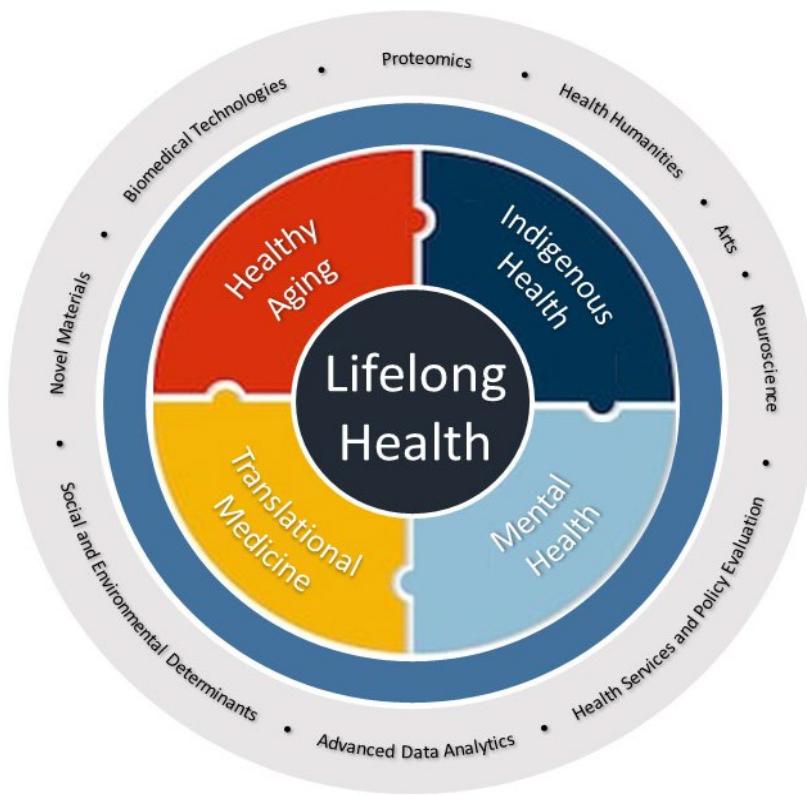


Figure 1: The four signature areas of the research pillar with the approaches and tools that support each area.

Percentage of UVic Researchers in HSI Signature Areas

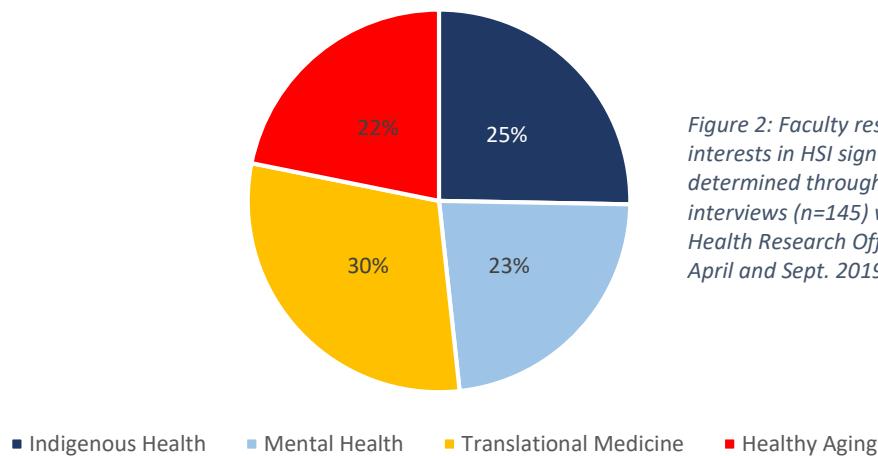


Figure 2: Faculty research interests in HSI signature areas, determined through individual interviews ($n=145$) with UVic's Health Research Officer between April and Sept. 2019.

UVic faculty are spread across each of the four signature research areas, as shown in *Figure 2* above. Importantly, our faculty bring a breadth of expertise to each of these signature areas, and future hires could further bolster this scope. Because of this range, the advisory group recognized that high-quality research undertaken within each signature area could take many different approaches. It is the richness of understanding enabled by the combination of these approaches that will propel UVic health research to international prominence. Therefore, our research visual includes an outer ring, which depicts the wide variety of tools and approaches available at UVic to support each of the signature areas. The tools and approaches are defined in the following ways:

- **Advanced data analytics:** examination of data or content using sophisticated techniques and tools to discover deeper insights, make predictions or generate recommendations.
- **Arts:** the interaction between creative or fine arts (including visual arts, music and performing arts) and human health and well-being.
- **Biomedical technologies:** application of technology and engineering to biological systems and medicine, with a focus on problems related to human health and disease.
- **Health humanities:** application of humanities disciplines to advance discourse about dimensions of human health and well-being.
- **Health systems and policy evaluation:** comprehensive study of health systems, health policies, development and implementation processes that shape quality, efficiency and health equity.
- **Neuroscience:** interdisciplinary study of the brain and nervous system and ways in which components of the nervous system affect behavior.
- **Novel materials:** discovery of new physical matter, substances or devices to improve human health and well-being.
- **Proteomics:** large-scale study of proteins, their functions and their role in disease and wellness.
- **Social and environmental determinants:** range of personal, social, political, economic, cultural and environmental factors that shape broad patterns of health and well-being.

The program pillar

The program pillar aims to strengthen and support existing health programs while also identifying new interdisciplinary and collaboration opportunities. This will help UVic attract, recruit and create pathways to success for talented students. As shown in *Figure 3*, drivers for this pillar include:

- Social responsibility
- Program demand at UVic
- Presence of other interdisciplinary programs in BC
- Labour market demand
- Ministry of Health workforce planning
- Ministry of Advanced Education, Skills and Training interest

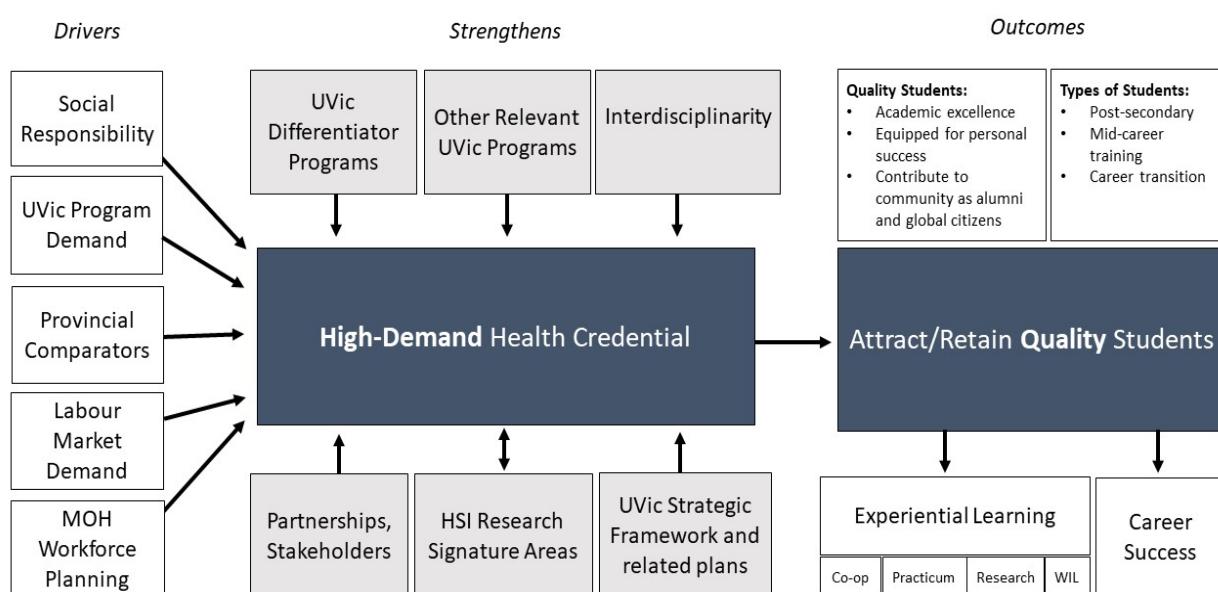


Figure 3: The drivers, strengths and outcomes of the program pillar.

We heard during our consultations that we should emphasize what makes UVic different from other institutions and build on those strengths. Strong health programs currently exist in the Faculties of Science, Social Sciences, Human and Social Development and the Division of Medical Sciences.

Differentiating programs within those faculties include biomedical engineering (BEng), chemistry for medical science (BSc), health information science (BSc, MSc, PhD), medical physics (MSc, PhD) and social dimensions of health (MA, MSc, PhD). A list of UVic's health-related programs is provided in [Appendix B](#).

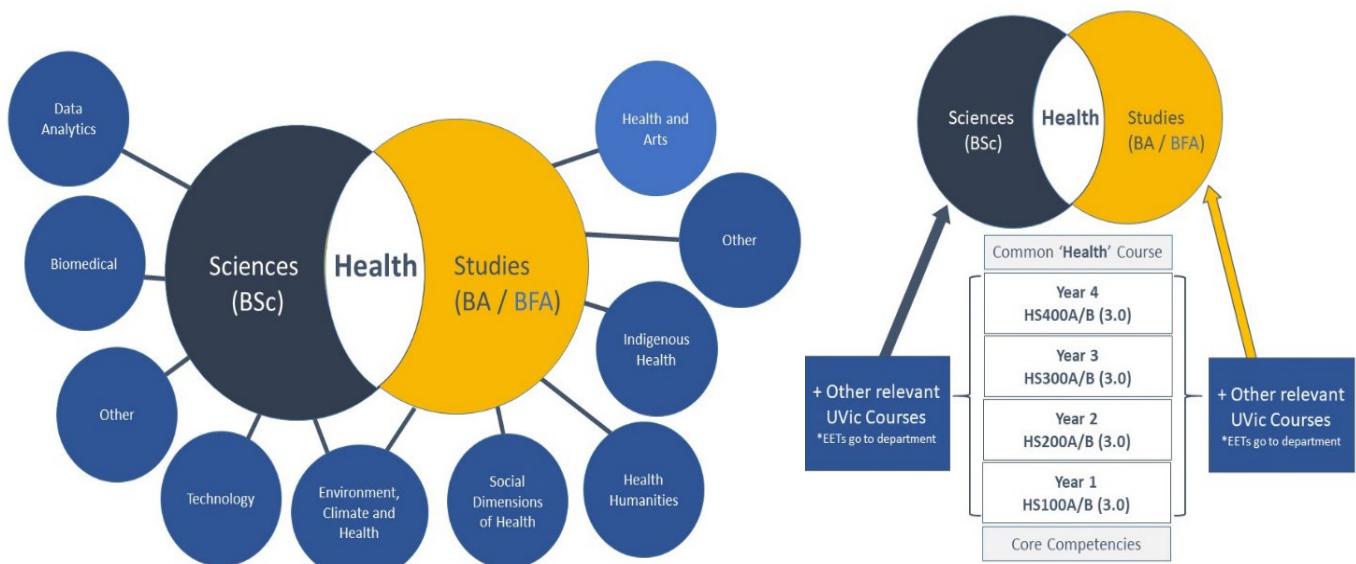
UVic's additional strengths include Indigenous-focused programs and streams as well as experiential learning opportunities such as co-op, practica, work-integrated learning (WIL) and honours research. Our undergraduate and graduate programs already provide pathways to post-graduate studies, medical education, professional education and post-graduate employment in the health fields—and we see potential for even more.

Expansions are currently underway in health information science, nurse practitioner and advanced nurse leadership, biomedical engineering, and direct-entry kinesiology. Opportunities may exist to provide graduate-level occupational therapy and physical therapy programs either in collaboration with UBC or independently. Building on our disciplinary strengths, we see benefits to creating interdisciplinary, health-related bachelor's degrees with streams of study in areas of strength and demand. Several Canadian universities have created such interdisciplinary programs in recent years, which have attracted

excellent students who want to tackle hard questions, interact with students from diverse backgrounds, think across boundaries, and begin careers that may not be clearly defined (i.e. entrepreneurship, combining health and art, thought leadership and health inequities). Undoubtedly there will be students who enter these programs as a pathway to health professions, but we can also provide an option to students who pursue an interdisciplinary health education to expand their career possibilities in other areas.

Enrolment in interdisciplinary health programs across the country is strong. Health sciences (HSc) programs at Simon Fraser University (SFU) are exceeding current enrolment targets and could accommodate more students if their budget model allowed. At McMaster University, where the HSc program offers a traditional pathway to a professional degree, hundreds of students apply each year for a handful of spaces and the average entering grade exceeds 95%. A similar program at Dalhousie is a strong magnet for out-of-province and international students. UBC does not currently offer interdisciplinary HSc programming. At UVic, we see an opportunity for a relatively small interdisciplinary health program that capitalizes on current strengths. For example, a Health Sciences BSc could include separate streams in data analytics; biomedical technology; and environment, climate and health. A BA/BFA could include environment, climate and health; social dimensions of health; health humanities; Indigenous health; and health and arts. The Office of Global Engagement provided information to suggest that health sciences programming at UVic would be attractive to international and indigenous students. UVic has drawn significant interest worldwide through the creation of our Indigenous law JD/JID program and, on a smaller scale, new high-quality interdisciplinary programming related to health could enhance our profile and attract attention.

Building on our disciplinary and interdisciplinary strengths and convening working groups across units, we can start small with current capacity and gauge interest over time towards establishing a BSc/BA/BFA program specific to health. New working groups could assess how the proposed programs would fit within the post-secondary landscape, taking into account our existing programs and unique characteristics, potential student outcomes, career trajectories and market outlook, environmental scan context, and laddering opportunities. *Figures 4 and 5 below depict how new health programming could be organized at UVic, with a common health course each year serving as the connection between BSc-*



Figures 4 and 5: One option for a new interdisciplinary health program. Other possible streams include health psychology, mental health, comparative health, aging, food/water security, substance use, lifespan, and global health.

and BA/BFA-specific streams. The University of Saskatchewan recently used the concept of a single, unifying core health course in each year of study (*Figure 5*) to organize new program options in Health Studies and have reported excellent success with this approach. Student satisfaction has been high, as this provides a way to ensure a common understanding of the complexities of “health” among the students while providing the opportunity for specialization in particular streams of interest. The advisory group noted considerable interest in such an approach at UVic, while recognizing the need to avoid duplication with existing programs.

The structures pillar

Structures refer to organizational frameworks within which academic activities occur. At UVic, we typically think of our structures in terms of departments, faculties and research centres.

Structures are important because they are catalysts for organizing activities, and they signal to external stakeholders areas where we have capacity and strength. For example, UVic’s Canadian Institute for Substance Use Research (CISUR) signals to people inside and outside of UVic that we have research capacity and activity in substance use research. It also signals that we value this area. Similarly, our School of Health Information Science signals that we are contributing to the social, environmental and economic needs of the province by graduating students with expertise in this area. Our structures help define our identity, because potential students, faculty recruits and external partners make assumptions about our health enterprise based on the structures we maintain. It is therefore important that we think carefully about our structures, so that we derive maximum benefit from them and use them to enhance our position.

One way to approach this issue is to consider how best to capitalize on our existing structures. We can raise UVic’s health profile by enhancing collaboration between clusters of activity, research centres and academic programs—collaborations that are founded on new and strengthened relationships between faculty members, academic units and research centres.

Clusters

Research clusters refer to informal groups of researchers with complementary expertise who work together to achieve a better and richer understanding of a common set of research questions than they could attain working individually. Clusters can be formed even with limited resources and are adaptable over time, enabling faculty to work together to make quick progress on a specific topic of interest. Clusters could evolve from teams assembled to work across disciplines and/or apply for research grants, or teams that pursue specific questions within the broader mandates of existing research centres. Emerging clusters could also act as building blocks for future centres.

Opportunities for clusters have been identified in a number of different areas: aging, proteomics (and ‘omics more broadly), neuroscience, materials science and global health. We have recently allocated four Canada Research Chair (CRC) positions to the general research area of aging, to create a new cluster of activity, galvanize the Institute on Aging and Lifelong Health, and create stronger academic links

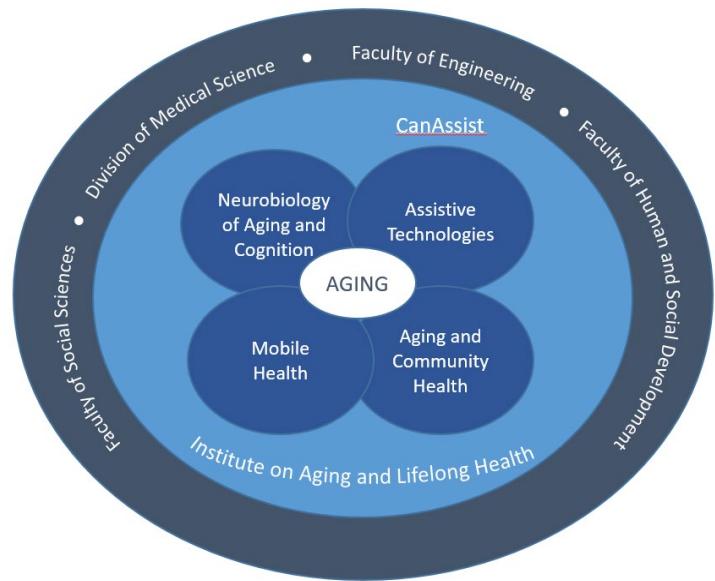


Figure 6: Identified opportunities for health research clusters. Research on aging also happens in the Faculties of Education, Fine Arts, Humanities, and Science.

between CanAssist and UVic. This cluster is shown in the center of *Figure 6* above. These recruitments are ongoing, but early indications are quite promising, with two of the four CRCs filled with faculty from other Canadian universities who already hold significant health-related funding. These CRCs will provide a framework for people to come together around the healthy aging signature research area, which spans many faculties at UVic.

We have also invested in translational proteomics research through chairs and other avenues. We have an existing strong group of faculty in this area who make use of infrastructure at the UVic-Genome Canada supported Pan Canadian Proteomics Centre and who link productively with researchers at the BC Cancer Agency. We recently recruited a new Leading Edge Endowment Fund Chair in this area and a Tier II CRC search is ongoing.

We can work toward similar outcomes for other potential clusters.

Research centres

Our faculty survey revealed widespread support for research centres and identified our centres as drivers of interdisciplinarity on campus. The advisory group agreed that research centres are very important at UVic and that it is important to increase faculty engagement and support for centres so they can flourish. Strong research centres will help us raise our external profile and build our health-research reputation at UVic.

UVic's Centre for Biomedical Research (CBR) was recently reviewed by an external panel, which recommended significant changes to enable the centre to contribute to the Health Sciences Initiative in a meaningful way. Discussions are underway. One possibility is that the CBR could re-invent itself as a "Centre for Translational Research," which would provide direct support to the translational medicine signature area of research. UBC has signaled interest in a partnership in this kind of centre.

We see several opportunities for our existing structures to benefit from enhanced and new relationships with external partners:

- Island Health: Clinical Research Institute Partnership (housed in our Division of Medical Sciences—resourcing, funding, structure and governance to be determined)
- BC Cancer Agency
- UBC: proteomics, healthy aging, translational medicine
- SFU: stem cell research
- Health authorities in British Columbia (including the First Nations Health Authority and Provincial Health Services Authority)
- Within UVic (e.g. data commons, civic hub, digital supercluster)

Many UVic faculty would like to better engage with our research centres. This would also help our centres raise their external profiles and encourage interdisciplinary research. Our centres should bring together people to discuss new ideas, form collaborations and receive support to advance those collaborations.

During our consultations, we learned that it can be difficult for faculty to engage with centres because there is a concern that this will take them away from their academic units and diminish research capacity within those units. Some faculty also believe that they will not benefit from engaging in a centre so they prioritize their time elsewhere. Some of these issues reflect cultural challenges and some reflect financial challenges. We recognize the need to address these challenges and will engage deans and other leaders on campus to determine how best to overcome them.

Academic units

We see an opportunity to create a new structure to signal our educational strengths in health and to provide a higher external profile for health research. We can start a dialogue on effective interdisciplinary programming to determine where to situate health programs to best attract a diverse community of talented students and build on our external reputation. This includes exploring opportunities to align existing programs where appropriate, and determining whether our current structures are effective in delivering high-quality academic programming as outlined in our institutional plans. Many potential students believe that UVic lacks health-related programs because our current programs are not located in units that are typically associated with “health” programs. This means that we may be losing high-quality students to other institutions. It also means that many of our students require significant help identifying the health programs they are most interested in.

The advisory group discussed several options for a new academic architecture at UVic to support our health programs. The advisory group concluded that this was an important conversation to carry forward once planning for new interdisciplinary programming has evolved.

The space and infrastructure pillar

To be nationally competitive as a health sciences institution, we heard that we need state-of-the art spaces tailored to our research and educational strengths. The Health Sciences Initiative will look to create opportunities for collaboration, promote the sharing of resources, and establish platforms for research while aligning activities across faculties and units.

We are already widely recognized for our proteomics facility and Centre for Advanced Materials and Related Technology (CAMTEC), where there is a strong approach to platforms and industry collaboration. We have the potential to be a leader in data science, provided we support research platforms like metadata repositories, data commons and biobanks. We also hope to further develop infrastructure partnerships with groups such as Population Data BC and the Health Data Coalition.

While remaining about the same size, UVic continues to develop and evolve high-quality academic and research programs that align with our strengths and directions and that are responsive to student interest, emerging priorities and social need. Some ways that we can support our students and researchers in these key areas of growth include updating more laboratory spaces to level-two biosafety, creating community and clinical research space, and increasing graduate student workspaces. Additional shared spaces for research centres and labs could promote interdisciplinary collaboration and foster opportunities for spontaneous collaboration. More classroom and faculty office spaces would likely be needed to support new pedagogical approaches and grow opportunities within physical and occupational therapy, health information science and kinesiology.

Depending on growth, we recommend consultations to explore the types of space required for research and programs, rather than for whom or for what program. By focusing on flexible, modular spaces, we can bring together researchers and graduate students from across disciplines who share similar approaches to research—allowing our experts and learners to work together toward solutions to some of today’s greatest health challenges.

The advisory group heard that purpose-built space for our research centres would help foster interdisciplinary research. We heard that our centres currently provide the best opportunities on campus for cross-discipline research, but most of our centres require more and/or different types of spaces. Often, building new health-related research space is more cost effective than retrofitting existing space, and we heard advocacy for modern, state-of-the-art space to successfully recruit outstanding new faculty members who have trained at top universities around the world.

Any major infrastructure project would require campus-wide and community consultations, internal assessments and resource requirements. We would also need to consider animal care, biosafety and equipment requirements. All projects would need to conform to the latest version of our Campus Plan and our vision for the future physical space of campus and be included in our Capital Plan with the Ministry of AEST.

An important consideration for such a proposed capital project would be to build a fundraising case in support of a donor campaign. The case would describe how donors could help support UVic to achieve the purposes of the Health Sciences Initiative and provide the case for new space, and it would inspire the external community with stories about our achievements and our potential to deliver even more in the future. Other universities in Canada have recently transformed their health missions with new buildings and spaces and we have the potential to do the same at UVic.

Recommendations and strategies

The advisory group proposes the following recommendations and strategies to realize the potential of the Health Sciences Initiative, listed by pillar and timeline. The implementation of these recommendations will require flexibility as many medium- and long-term ideas may need to roll out over an extended period, as appropriate, and may be resource dependent if they are of significant impact.

Pillar	Timeframe	Strategies
All	Ongoing	<ul style="list-style-type: none"> • Consider hiring a Special Advisor, Health, to lead the next steps in the HSI; this would start as a term position and have a joint reporting relationship to the VPR and VPAC • Create small advisory groups for individual pillar-specific activities (e.g. implementation committee, research group, program curriculum group) • Highlight our health research and programs on UVic websites where appropriate (e.g. Research, undergraduate and graduate program pages, etc.), bolstering our online profile both internally and externally
Research	Short term (1-2 years)	<ul style="list-style-type: none"> • Create an internal peer-review process for health-related grant applications • Hire a grants officer to specialize in pre-award support for health-related applications • Ensure UVic is well represented on national grant review committees • Lobby CIHR to invest more funding in medium-sized universities • Provide internal seed money for highly-rated grants that are not funded to encourage more applications, for bridge funding, and for new interdisciplinary research activities or clusters • Review human and animal ethics processes to streamline approvals while ensuring compliance with regulatory requirements • Organize a university-wide Health Expo to showcase activity, stimulate collaboration and information sharing, and celebrate success

		<ul style="list-style-type: none"> • Engage Indigenous faculty, students and community to develop the Indigenous Health signature area • Pursue meaningful partnerships with external stakeholders • Position UVic to lead provincial initiatives in key areas of strength • Enhance translational proteomics partnership with UBC • Create targeted communications to enhance awareness of UVic's health research, including online tactics (e.g. social media) and press releases
	Medium term (3-5 years)	<ul style="list-style-type: none"> • In collaboration, VPAC and VPR to consider strategic recruitments of new faculty into signature areas • Identify new ways to create research chairs (e.g. through partnerships, donors) • Increase start-up packages to be more competitive and give new faculty more opportunities to establish their research programs • Facilitate knowledge mobilization through meaningful partnerships • Review metrics on how we evaluate and reward success at UVic and build a culture valuing all forms of research outputs and outcomes
	Long term (5-10 years)	<ul style="list-style-type: none"> • Leverage partnerships to facilitate knowledge transfer with the community • Ensure alignment of strengths in health research and health programs
Programs	Short term (1-2 years)	<ul style="list-style-type: none"> • Work with existing academic programs to further promote our health strengths as an institution • Develop and implement communication plans for health programs, including online tactics (e.g. targeted social media advertising) • Consider alignments with research pillar • Implement planned expansions (e.g. health information science, biomedical engineering, kinesiology, nurse practitioner) • Form BSc/BA health programming planning group • Appoint leadership (to develop space, budget, curriculum, etc.) for new BSc/BA health program • Hire a program advisor to support and guide students through existing health programs • Continue incremental increases in budget for graduate student funding • Develop a plan to enhance graduate student funding from multiple sources (e.g. UVic, BC Graduate Scholarships, donors, etc.) • Develop community partnerships through co-op (e.g. FNHA, VIHA, PHSA, BC Cancer Agency, etc.) • Work with government on physical and occupational therapy opportunities at UVic, both academic and clinical

		<ul style="list-style-type: none"> • Work with Ministries on supporting health human resourcing needs through program expansions (e.g. nurse practitioner) • Explore UVic graduate program opportunities for nursing and IMP MD students
	Medium term (3-5 years)	<ul style="list-style-type: none"> • Develop BSc/BA program proposal(s) and seek appropriate consultation and approvals through Senate Committee on Planning, Senate, Board of Governors, and Province of BC • Launch BSc/BA health programs • Hire two to four faculty members associated with BSc/BA health program, depending on growth • Develop more community partnerships through co-op • Launch new graduate programs aligned with research pillar • Seek donor funds for graduate student fellowships in health sciences
	Long term (5-10 years)	<ul style="list-style-type: none"> • Scale BSc/BA and graduate health programs
Structures	Short term (1-2 years)	<ul style="list-style-type: none"> • Complete strategic re-organization of the Centre for Biomedical Research • Continue conversation with UBC about a Translational Medicine Centre that would build bridges with UBC Medicine and Island Health in proteomics and other areas of strength • Identify ways to encourage faculty to engage with research centres and ensure research centres are financially sustainable (e.g. advancing interdisciplinarity)
	Medium term (3-5 years)	<ul style="list-style-type: none"> • Develop a Translational Medicine Research Centre or Clinical Innovation Hub to bolster research links with Island Health • Create and/or support more research clusters • Consider options for a new faculty structure to house interdisciplinary health programs and research
Space and Infrastructure	Short term (1-2 years)	<ul style="list-style-type: none"> • Start a conversation on creating new shared platforms and spaces for research • Support existing research platforms through central funding • Begin conversation on the types of new shared spaces required in the future
	Medium term (3-5 years)	<ul style="list-style-type: none"> • Build and invest in new shared infrastructure platforms • Start a fundraising campaign for capital and research support
	Long term (5-10 years)	<ul style="list-style-type: none"> • Implement a capital plan to increase research and meeting spaces • Initiate a range of capital projects to transform health research and programming. Explore government and private funding opportunities. For example: <ul style="list-style-type: none"> ○ Expansion/extension of the Medical Sciences Building for more lab space for biomedical engineering, to bring proteomics infrastructure onto campus from the

		<p>Vancouver Island Tech Park, to expand ‘omics lab space, to enhance public health research</p> <ul style="list-style-type: none"> ○ Purpose-built spaces for research centres ○ Space for new physical and occupational therapy programming and clinic to combine student training with community outreach ○ Shared space within a new interdisciplinary research building
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Measures of Success

How will we know that the Health Sciences Initiative is successful? Our primary measures will be based on the following:

- Recruitment and retention of talented faculty and students
- Academic/industry positions secured by post-doctoral trainees
- Student success and employability after graduation
- Improved university rankings and reputation
- New research collaborations and partnerships
- Increased funding, grants and fellowships
- Expanded space for interdisciplinary research and learning

If successful, we will recruit and retain outstanding faculty as well as undergraduate, graduate and post-doctoral trainees interested in health research and programs. Students could enter from high school or be mid-career professionals looking to enhance their training or transition careers. Having modern facilities and labs will be crucial for attracting more first-choice faculty and the very best students.

Student success can be measured by academic excellence, satisfaction rates, post-graduation employment rates, and contributions to the community as alumni and global citizens. During their time at UVic, we want to ensure that every student has the opportunity to engage in research and experiential learning, which includes everything from community practicums to international co-op placements.

Our success should have a measurable impact in our national and international rankings and reputation. Executing a strategic communications plan will help establish us as a leader in health research and as the university of choice for faculty and students.

We will be successful if external communities begin to recognize our areas of strength and value our outcomes. Our four signature areas of research should be known outside UVic and we should increasingly be consulted by government, foundations, think tanks and funding agencies looking for evidence and input within these areas. UVic should be known as a place where health research and programs not only exist, but excel.

Community-engaged research is increasingly viewed as the keystone to translational medicine and improving the health of Canadians. The Health Sciences Initiative will create a shift toward valuing the collective—building relationships with various communities and patient partners, building collaborative and interdisciplinary activities and research teams on campus, advocating for services and policy, and implementing changes in practice. This will also build support for a range of research outputs, from publications to artistic contributions.

And finally, we have a specific goal to increase CIHR funding from <1% of the national total (\$6M currently) to about 3% (\$30M). We also want to identify and take advantage of other funding

opportunities for health-related research (e.g. National Institutes of Health, Michael Smith Foundation for Health Research, Foundations, industry, external partnerships, donors, etc.).

Conclusion

We must carefully consider how we can use and build upon our health-related research and program strengths across the university and with our strategic partners in order to achieve maximum impact. We see this concept paper as the *beginning* of a transformative journey for health research and programming at UVic, which is one reason why this document is heavy on the “why” and the “what” but a bit light on the “how.” The “how” will require ongoing conversations and a collective effort. We will create opportunities for members of the UVic community to discuss and inform the next steps, including the setting of priorities, pace of work and sequencing of activity. And, we will rely on the community to work with us to advance next steps. To that end, we invite you to consider how you can help ensure the success of this initiative.

UVic is poised to become a national leader in health research and programming—advancing our goal of being the Canadian research university that best integrates outstanding scholarship, engaged learning and real-life involvement to contribute to a healthier and more equitable future for everyone. This is what we mean by **“advancing lifelong health for all.”**

Contact

We welcome feedback on the HSI. Please email your thoughts to hsi2018@uvic.ca. The initiative is a joint activity of the Offices of the Vice-President Academic and Provost and the Vice-President Research.

Appendix A: Timeline

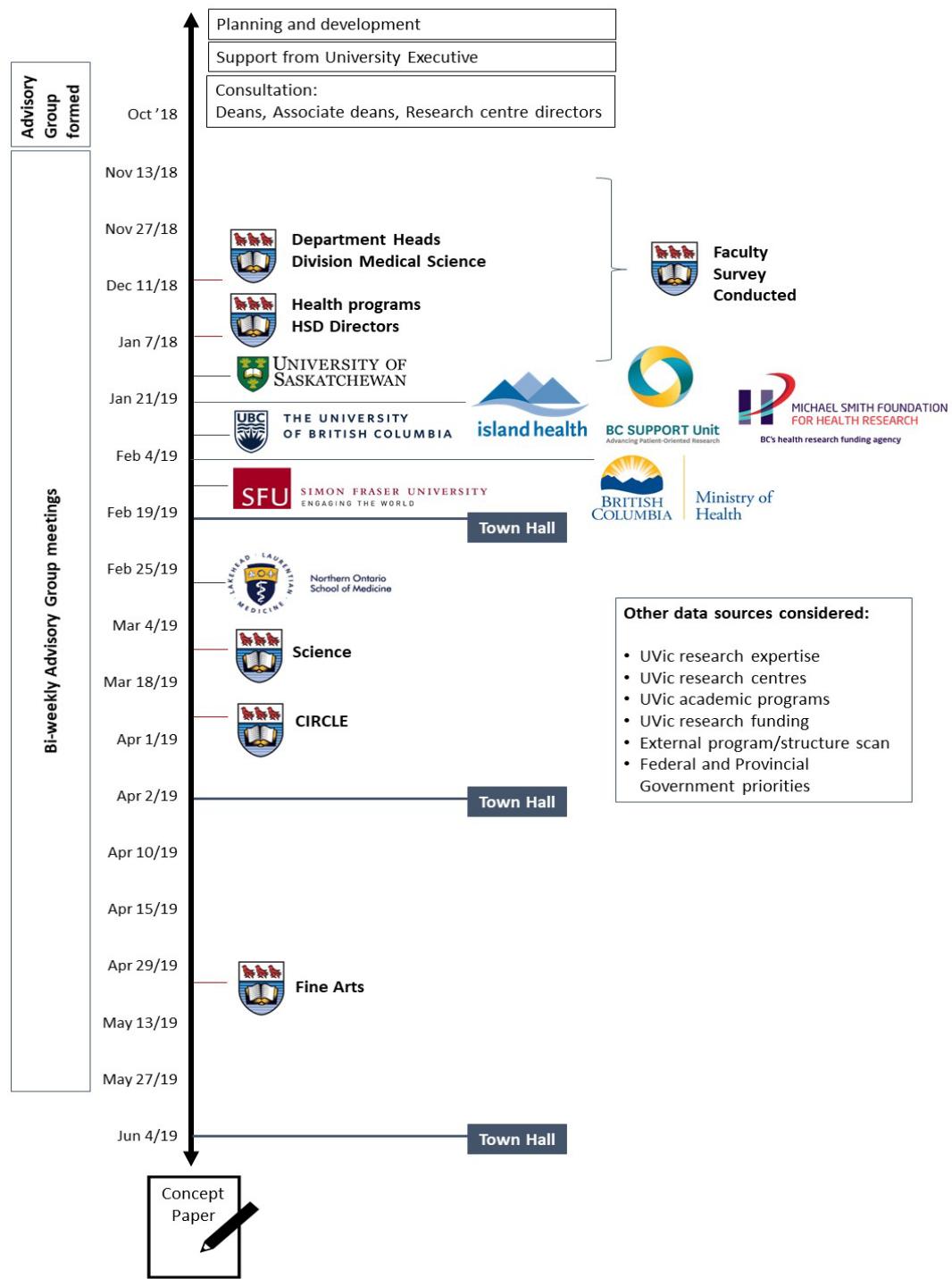


Figure 7: The project timeline and consultations thus far, leading up to the delivery of this concept paper.

Appendix B: Health programs at UVic

Students at UVic already enrol in a range of high-quality undergraduate and graduate health programs in the Faculties of Science, Social Sciences, Education, and Human and Social Development and the Division of Medical Sciences, including:

- Biochemistry and Microbiology
- Biology
- Biomedical Engineering
- Chemistry
- Chemistry for Medical Science
- Child and Youth Care
- Exercise Science
- Health Information Science
- Kinesiology
- Medical Physics
- Microbiology
- Neuroscience
- Nursing
- Physics
- Psychology
- Public Health
- Social Dimensions of Health
- Social Work