



FACULTY OF MEDICINE
eHealth Strategy Office

annual report
2011 | 2012



In 2011, the International Telecommunications Union declared broadband Internet access a basic human right, on par with rights to food, health and housing.

Everyday, many people are surrounded by digital technologies and broadband Internet, not just in Canada but globally. Leveraging these technologies for health services, what we call eHealth, is no longer just a concept; eHealth is becoming mainstream for the public, patients, health organizations and policy makers alike. Just as people don't think twice about using the Internet to do their banking, socializing and travel, there is no question that as technology-enabled health services become an integral part of care, differentiating between "eHealth" and "healthcare" will soon become unnecessary.

Our current challenges with eHealth adoption are not caused by a lack of ideas, innovations or good practices, but rather by the integration of myriad technologies into current delivery models, and by the introduction of new technologies that our current system cannot incorporate efficiently. Strategies addressing the integration of new technologies to serve people, health professionals and health administrators are pivotal to take eHealth past the tipping point and into seamless adoption.

The ongoing evaluation of eHealth programs and services is necessary to ensure continuing quality improvement, and the evidence that eHealth can improve care is building. We also have work to do in order to manage the change required to build beyond simple service provision and into fruitful co-creation of a technology-enabled health system that neither patients nor health providers could have conceived of on their own. I believe this is the exciting future of how technologies can serve to promote excellence in health and wellness, from one person to one community and, ultimately, to one world.

A handwritten signature in black ink, appearing to read 'KHo'.

Dr. Kendall Ho
Director, eHealth Strategy Office
Professor, Department of Emergency Medicine

Message from the Director

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Message from the Assistant Directors

RESEARCH

With over 20 active research and evaluation projects across community engagement and professional practice portfolios, as well as grant development and knowledge sharing activities, our team has been busy and growing. Whether focused on understanding cross-cultural perspectives in online health promotion or on evaluating electronic decision support tools in interprofessional clinical practice, we are constantly learning and sharing the promise of eHealth.

2011-2012 has been a year of expansion and growth not only in terms of research revenue, but also in terms of our research capacity, partnerships and outreach. Our staff has grown with new project managers, research coordinators and research assistants. We consistently attract talented and skilled team members from a variety of disciplines, which enriches the perspectives of our research and evaluation activities. We have engaged a number of graduate and health professional students in practical placements, assistantships and volunteer positions. We are fortunate to have sustained partnerships with health authorities, policy makers, community organizations, health professionals and academics within and beyond UBC.

Through these partnerships, the eHealth Strategy Office is well-positioned to contribute evidence and translate knowledge for the better health of individuals, communities and populations.

EDUCATION

On the education front, we ran the first ever North American (possibly worldwide) eHealth summer camp for high-school students in July and August 2011. Two vibrant groups of students explored health technologies, built their own smartphone health apps, visited the TELUS Innovation Centre and the Centre of Excellence for Simulation Education and Innovation (CESEI) at Vancouver General Hospital and met a variety of professionals in health careers. The camp attracted the attention of the media with articles, TV segments and blog posts.

At the university level, Health Informatics for Health/Life Sciences Students (IHHS302) ran again in the summer of 2011, along with two new postgraduate courses in Health Informatics offered through the School of Population and Public Health. We partnered with the Faculty of Arts on a TLEF project developing a new tool that allows students and instructors to comment on student videos (e.g. practice clinical skills exams) using text comments, other videos or a simple flag.

Continuing our success from last year, this year's monthly eHealth Investigative Partnership Program (eHIPP) rounds included diverse topics including social media in healthcare, health startups and new technologies in eHealth and Electronic Medical Records (EMRs) for long-term condition management.

TECHNOLOGY

We are currently working on online platforms for two different population health surveys. These surveys will track data over time as well as provide customized health profiles and individual recommendations on how to improve their health. We have also been developing custom web platforms and sites to allow secure online communication between health professionals and their patients.

The use of mobile devices in clinical settings is another area of focus for our office. We continue to provide BC Guidelines to physicians and health care professionals via our CliniPEARLS mobile platform and have over 8,000 users to date.

Finally, the eHealth Strategy Office has begun to articulate its Technology Roadmap for the next 3 years, to help strategically align investment with required current and likely future technical focus areas.

Liz Heathcote

Assistant Director, Education
Acting Assistant Director, Technology

Helen Novak Lauscher

Assistant Director, Research

Transforming eHealth *for life*

The mission of the eHealth Strategy Office is to explore how modern information and communication technologies can enable, enhance and fulfill the academic mission of education, research, knowledge translation and community engagement in the context of healthcare, ultimately leading to social accountability of academia in partnership with communities.

Our office's vision is to improve and transform health practice through information and communication technologies, supporting health professionals in the provision of best practices and patients in the achievement of optimal wellness.

Our office's core business is to explore provincial, national and international strategies in two key directions:

- Serving health professionals and health trainees/learners by developing and evaluating technology-enabled practice models for healthcare;
- Serving the public, patients, communities and policy makers/administrators by developing and evaluating technology-enabled engagement strategies for optimal health outcomes.

The 34 members of the eHealth Strategy Office represent a multi-disciplinary expertise including clinical practice, public health, policy analysis, educational research, library science, statistics and computer science. These skills, alongside our internal and external partnerships, allow us to cultivate a fertile ground on which to conduct multi-faceted and innovative research, education, evaluation and capacity building in eHealth *for life*.

KNOWLEDGE STUDIO

What is Knowledge Studio?

Knowledge Studio is a high-tech hub where medical knowledge can be created, learned, discussed and shared.

Videoconferencing.
Collaboration space.
Video streaming.
Production & editing.

Visit us:
UBC Hospital
Purdy Pavilion, G35

For more information:
knowledge.studio@ubc.ca



ehealth.med.ubc.ca/knowledge-studio

In 2010-2011, the eHealth Strategy Office received a generous donation to create a high-tech hub where health and medical knowledge can be disseminated and shared using innovative technologies that we call the *Knowledge Studio*.

The Knowledge Studio is designed to be an innovative base for research projects using video and multimedia equipment, other electronic devices and high-speed connectivity to support eHealth-enabled care and education for communities throughout BC.

In December 2011, following renovations, we held an open house as an opening for the Knowledge Studio, and stakeholders and potential partners from across the Faculty of Medicine attended to interact with the technologies available in the Knowledge Studio that are now available to support new and innovative projects.

This year, the Knowledge Studio has supported many of the eHealth Strategy Office's own research programs and we are actively exploring partnerships and providing support for research projects across the Faculty of Medicine and UBC, with groups including:

- Aboriginal eMentoring BC
- BC Provincial Academic Detailing Service (PAD)
- College of Health Disciplines
- UBC School of Nursing
- Collaborative REsearch Team to study psychosocial Issues in Bipolar Disorder (CREST.BD)

We are looking forward to building further partnerships and to supporting innovative uses for video, multimedia and other technologies in research to improve health in the coming year.



eHealth Strategy Office Review

The eHealth Strategy Office (eHSO) was established in September 2008 with the Director's term set for three years until December 2011. In March 2011, we submitted a self-study report to the Faculty of Medicine (FOM), in advance of the triannual internal review. During 2011, the Internal FOM Review team considered the self-study report and interviewed 17 stakeholders within the Faculty.

Key findings from the Internal Review report:

- Research output considered "productive" and "cutting edge";
- Recognition of eHealth as central to the future of FOM;
- eHSO has strengths in interprofessional collaboration and community outreach that could be of benefit to FOM;
- The lack of internal visibility of eHSO work means that its full value to the Faculty is not realized, specifically in consultation with departments and in training students and faculty members in eHealth;
- The relative lack of departmental and faculty involvement in eHSO activities compared to the broad range of its external partnerships should be addressed;
- There is a lack of clarity of eHSO core business, particularly concerning overlap with other FOM units;
- Given its activities in education, research and community engagement, establishing governance of the eHSO is complex, particularly in the assignment of the unit to a single Executive Associate Dean portfolio.

The EAD Education struck an eHSO Review Advisory Committee of 7 senior FOM members to help inform the eHSO strategy in early 2012. A resulting eHSO proposal was submitted to the Faculty Executive on June 30th, 2012.

A Faculty response is expected by December 2012.

1. **Develop and implement eHealth education for medical students, residents and faculty.**
2. **Support departments in eHealth implementation and research.**
3. **Design, implement and evaluate educational research using eHealth methods and tools.**
4. **Provide production, evaluation and technical guidance on multimedia or video-based research projects using the eHealth Knowledge Studio.**
5. **Advise, participate in and co-chair eHealth-related committees.**
6. **Support research and evaluation of technological innovations in health practice.**
7. **Support community engagement projects interested in technology-enabled patient-centered care and knowledge translation.**
8. **Work with governments on evidence-based policy and knowledge translation for eHealth.**
9. **Host, partner with and provide cultural support for international eHealth initiatives.**
10. **Support the Faculty strategy for driving innovation, particularly in the domain mobile devices, telehealth and electronic means of communicating with the public, patients and families.**

eHealth Top 10 Services

Project Achievements and Milestones

Research ■

INTERCULTURAL ONLINE HEALTH NETWORK (iCON)

iCON has been a flagship project for the eHealth Strategy Office since 2007. The health forums and workshops that offer health information in native languages for Vancouver-area immigrant communities have drawn unexpected and unprecedented crowds. This year saw the expansion of the program to Aboriginal communities, with an interactive workshop presented at the BC Annual Elders' Gathering in Abbotsford in July 2011. In March 2012, iCON collaborated with the Guangzhou University of Traditional Chinese Medicine through funding from Health Canada on international Diabetes care forum. iCON 2.0, the new and improved website was launched this year to provide additional interactive opportunities to users.

ICON: DEVELOPING MULTICULTURAL PEER SUPPORT MODELS

This project will support community members and patients with diabetes using live and online formats. It will address the need for diabetes management and prevention programs in rural communities, specifically in Punjabi- and Chinese-speaking communities whose rates of diabetes are higher than the general population. The central goal of the study is to evaluate a peer mentorship model where community members are trained to facilitate diabetes support and education with their peers online. Partners include the Lawson Foundation, S.U.C.C.E.S.S. and Progressive Intercultural Community Services and the project is funded by the Public Health Agency of Canada.

YOUR VOICE COUNTS: TRAINING PATIENTS TO BE EFFECTIVE PARTNERS IN HEALTH SYSTEM REDESIGN

iCON partnered with the Patient Voices Network (Impact BC), Fraser Health Authority, and the Ministry of Health's Patients as Partners initiative for this innovative project. Funded by the Canadian Health Services Research Foundation, the purpose of the project is to help provide the knowledge and skills required for patients to be engaged in and contribute to the health care system in BC at local, regional and provincial levels. During 2011-2012, there were three workshops addressing "Systems 101", communication skills, and practical ways to get involved in the health system. Your Voice Counts offered workshops in English, Punjabi, Cantonese and Mandarin.

TECHNOLOGY-ENABLED ACADEMIC DETAILING (TEAD)

This year eHSO launched a website for the Provincial Academic Detailing (PAD) service that included a revised electronic community for their academic detailers. To promote the service further, we created scripts for PAD/TEAD promotional videos to be produced Fall 2012. Working with the academic detailers, we restructured the web-conference TEAD session format for more interaction between participants and detailers. Post-session surveys indicated positive feedback from participants, and interviews with academic detailers will inform the future implementation of TEAD.

TELEMENTAL HEALTH LITERATURE REVIEW

The focus of this scoping review, supported by the BC Ministry of Health's Mental Health and Addictions Branch, encompasses telehealth for mental health and substance use services, best practices, and policies guiding telehealth services. This work is intended to generate recommendations for addressing the current and emerging needs of telemental health and substance use services in the province.

EHEALTH MENTORING: BUILDING PATHWAYS TO HEALTH CAREERS FOR ABORIGINAL YOUTH

Aboriginal eMentoring BC connects post-secondary health sciences student mentors to Aboriginal secondary school students across BC, with the aim of supporting Aboriginal student transitions into post-secondary programs. In partnership with three First Nations communities, two school districts and 5 post-secondary institutions, 66 mentees and 58 mentors enrolled in eMentoring's first cohort that ran from September 2011 – June 2012.

INSPIRENET: EVALUATING E-COMMUNITIES OF PRACTICE FOR NURSING HEALTH SERVICES RESEARCH IN BC

InspireNet (Innovative Nursing Services & Practice Informed by Research & Evaluation Network) is a provincial network in British Columbia with the goal of improving nursing health services. eHSO has partnered with InspireNet to conduct an evaluation of the network. Over the past year, a survey was distributed and interviews were conducted with members to provide insight into how InspireNet is functioning and how its teams are contributing to the network's goals. Data analysis is underway.

E4PROS: EDUCATION FOR PRESCRIBING REVIEW AND ONLINE SUPPORT PILOT

Funded by the College of Pharmacists' Pharmaceutical Outlook Research on Special Authority on e-Drug and e-Education (PhORSEE), and based on a partnership with the GPSC Practice Support Program (PSP), e4PROS is evaluating the use of technology to deliver prescribing education to physicians. Physicians have been engaged to provide feedback on various aspects of prescribing (such as the use of Special Authority) and types of technology (such as web-conferencing). The data will be used to inform a larger grant application.

FIRST NATIONS AND INUIT HEALTH BRANCH EHEALTH EVALUATION

In partnership with researchers at the University of Calgary, this evaluation aims to tell the regional and national First Nations eHealth/telehealth partnership story and to highlight jurisdictions that are working to integrate access and delivery of community health services. Ultimately, this project aims to establish an agreed upon First Nations eHealth/telehealth evaluation framework for the purposes of measuring progress, establishing accountability metrics for program performance, and adjusting eHealth investments to better meet First Nations regional needs over the next five years.

TECHNOLOGY ENABLED LEARNING NEEDS ASSESSMENT SURVEY

In July 2011, we surveyed first-year residents in the UBC Faculty of Medicine on their experiences with technology to assess their exposure to and attitudes toward technology-enabled learning tools. This survey formed part of a larger study investigating the ways in which ICTs can be used to support the academic and clinical aspects of postgraduate programs. Residents provided feedback on online collaboration tools, social media and mobile decision support, among others.

EVALUATING ELECTRONIC MEDICAL RECORD COMPETENCY SKILLS USING OBJECTIVE STRUCTURAL CLINICAL EXAMINATIONS (EMR OSCES)

The purpose of this exploratory project is to define core electronic medical record (EMR) competencies and to develop objective structured clinical exams (OSCEs) to assess those skills. The goal is to guide changes in core medical curricula. In partnership with the University of Victoria, we conducted two focus groups with physicians, educators and OSCE coordinators to design a potential OSCE for assessing EMR competencies. A proposal for additional funding is currently under review.

EHEALTH KNOWLEDGE STUDIO

The Knowledge Studio held an official open house in December 2011 (see page 9). Equipment from the studio has been used to develop online health resources, for example, medical students in the Doctor, Patient and Society (DPAS) course created a series of videos to prepare medical students for practice in the Chinese community. The number and variety of multimedia projects continues to increase and our first productions will be ready for release in Fall 2012.

EHEALTH SUMMER CAMP

In July 2011, eHSO hosted the first ever North American (and possibly worldwide) summer camp in eHealth for high-school aged students. 50 students across two week-long camps explored health technologies in practice at the Centre of Excellence for Simulation Education and Innovation (CESEI) and TELUS Innovation Centre, developed health-related smartphone apps and discussed possible career paths with a variety of people working in health and technology careers.

HEALTH OPTIMIZATION THROUGH ONLINE SELF RISK ASSESSMENT

With philanthropic support of the Sun Life Assurance Company of Canada, this collaborative project with the UBC Department of Urologic Sciences and the Men's Health Initiative of British Columbia (MHIBC) designed and developed an online survey and algorithms to assess an individual's risk of developing seven different chronic health conditions. The survey and draft reports have been developed, and a prototype platform and website is complete. The risk assessment model and the platform are now slated to undergo additional rounds of validation and refinement by medical experts, and further testing with additional use cases.

Education

REMOTE HANDS-ON INTERACTIVE MEDICAL EDUCATION (RHIME)

In its third year the RHIME program continued to provide opportunities for remote and rural medical students to receive video feedback on their Objective Structured Clinical Exam (OSCE) skills from trained preceptors and mentors. Ten students at three different medical centres across the province were mentored by two trained preceptors, through an online video sharing process. Access to trained preceptors and the mentoring relationships provided an opportunity to prepare for OSCEs that may not have otherwise been available in rural locations.

LIGHTS, CAMERA, REFLECTION!

In collaboration with the Faculty of Arts, a Teaching and Learning Enhancement Fund (TLEF) grant funded the development of specialized software for video annotations used in reflective learning. The software, called The Collaborative Lecture Annotation System (CLAS), enables students to upload videos demonstrating skills in a secure online environment. They can then share videos and receive feedback from peers and instructors in the form of video- or text-based annotations. The user-centred design enables easy navigation and has search functions for students to find and reflect on their videos easily. This software was specifically designed for RHIME (see above), but the functionality of the software provides for potential uses across many other subjects.

FACULTY ENGAGEMENT IN EDUCATIONAL TECHNOLOGIES

In partnership with MedIT, this initiative involved the design of a survey exploring teaching faculty members' engagement with educational and clinical technologies for release in Summer 2012. Data from the survey will inform ongoing educational technology strategies for the Faculty of Medicine.

Technology

MY HEALTH, MY COMMUNITY

Partnering with Vancouver Coastal Health, My Health My Community aims to develop an interactive web-based survey to collect data on health, lifestyle, environment and community characteristics. Additionally, the project aims to build inter-sector coalitions that can help shape community services and amenities to meet local needs, influence social determinants of health and tackle health inequalities. Stakeholder consultations will inform the survey content and platform currently being designed.

CAREX WORKPLACE EXPOSURES MOBILE TOOL

This project is in the feasibility review phase of a proposed mobile-friendly tool to assist doctors and their patients suffering from occupational diseases. Preparations are being made for a Fall 2012 gathering of experts and stakeholders to review focus group findings, share knowledge and explore the desired outcomes for a workplace exposure tool.

BC GUIDELINES

Usage of the BC Guidelines smartphone app continues to increase, with over 8000 physician and health professional users currently registered. This app contains over 35 clinical practice guidelines developed by British Columbia's Guidelines and Protocols Advisory Committee (GPAC).

CHINA COLLABORATIONS

The eHealth Strategy Office has been working closely with health care partners in China to collaborate in policy engagement, eHealth education and research. Through these collaborations, we hope not only to provide support to the Chinese population in BC and Canada, but also to share skills and achieve mutual benefits through international cooperation.

The objectives of our China collaborations include:

- Enhancing Canada-China stakeholder relationships in health care by building institutional linkages.
- Forming enduring international healthcare exchange platforms to bring key stakeholders and experts together.
- To provide training and educational programs for family physicians, public health researchers and hospital managers in eHealth.
- Building capacity for academic research and public health education.
- Supporting the efforts of China's rural health system reform.
- Working collaboratively to build scalable and sustainable eHealth services and education that supports both urban and rural areas.

Specific Canadian-Chinese events during 2011-2012 facilitated these goals. On March 25, 2012, eHSO in partnership with the Guangzhou University of Traditional Chinese Medicine hosted "Diabetes Prevention and Management: An Exploratory Workshop through Western and Eastern Medicine" in Guangzhou, China. With medical experts from both countries, the workshop explored diabetes prevention and self-management through the perspectives of both Western and Eastern medicine.

We plan to host a second China-Canada Health Academic Forum, on September 10th, 2012. A delegation of guests from China consisting of hospital executives, administrators and provincial government officials will attend this event focused on hospital management issues, infection control and eHealth.



FACULTY OF MEDICINE
eHealth Strategy Office



In the news

August 2011

Introducing high school students to eHealth

Vivian Luk | Globe and Mail

National news article on the eHealth Summer Camp.

October 2011

New Technology, New Generations. Taking eHealth to High-School Students

Healthcare Information Management & Communications, Vol. 25, No. 3

Submitted publication in an eHealth industry magazine.

November 2011

UBC健康講座網上直播500現場觀眾400網友與醫生互動

Singtao Daily

Newspaper write-up of the October 2011 iCON forum on chronic disease prevention.

December 2011

Invitation to a (tech) Revolution

UBC Medicine Magazine, Vol. 7 No. 2

Article on the summer camp with comments from campers and instructors.

December 2011

Segment on Knowledge Studio opening

OMNI News (Cantonese)

Television coverage of the open house for the eHealth Knowledge Studio.

January 2012

Calgary Wait Times App

The National (CBC)

Kendall Ho provided comments for a national news segment on a recent medical app.

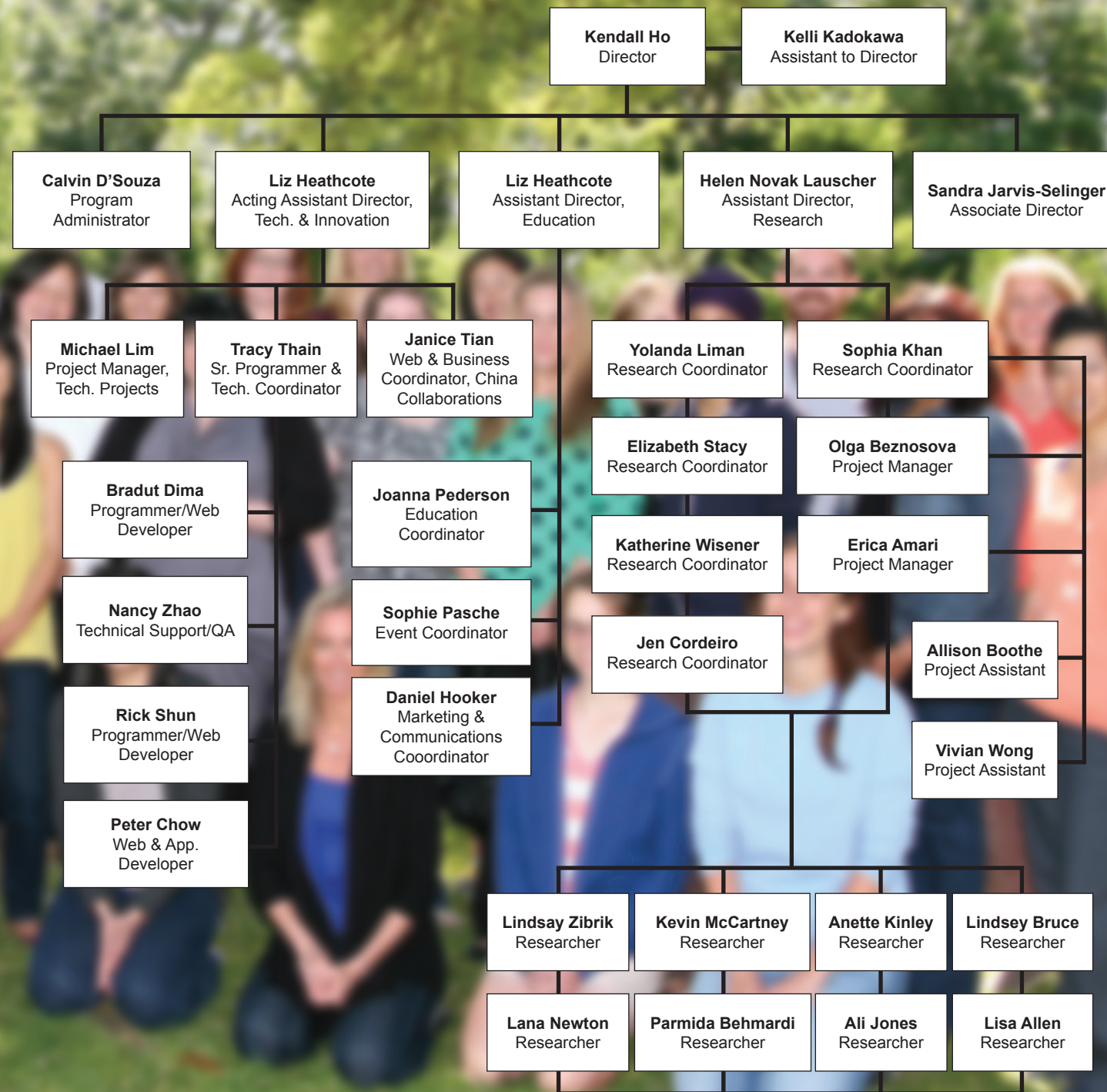
Grants

Granting Agency	Title	Type	Fiscal Year	Principal Investigator	Co-Investigators
Shenzhen Government Technology Research and Development Fund	Intelligent Health Monitoring: developing a mobile medical biometrics monitoring & communication system	Comp	2011-2012	Wang Lei Hu Xiaowei Kendall Ho	Helen Novak Lauscher Janice Tian Mark Vernon
UBC Teaching and Learning Education Fund	Lights, camera, reflection! Scaling up student-created video capabilities for curriculum enhancement	Comp	2011-2012	Kendall Ho	Shane Dawson Richard King Richard Kurth Liz Heathcote Helen Novak Lauscher Dave Lampron, et al.
Health Canada International Health Grants Program	Promotion of public health engagement and education through live forums and electronic media for chronic disease management	Comp	2011-2012	Kendall Ho	Helen Novak Lauscher
BC Ministry of Health Services	Inter-Cultural Online Health Network (ICON) for Chinese, Punjabi, and First Nations Communities	Non-Comp	2011-2012	Kendall Ho	Helen Novak Lauscher Sophia Khan Elizabeth Stacy
College of Pharmacists of British Columbia	E3PROS: electronic environment to support evidence based prescribing	Non-Comp	2011-2012	Kendall Ho Malcolm Maclure	Keith White Helen Novak Lauscher Jennifer Cordeiro

Awarded

Granting Agency	Title	Type	Fiscal Year	Principal Investigator	Co-Investigators
Vancouver Coastal Health	Defining an Electronic Strategy to Support Needs Based Health Services Planning and Optimal Health Promotion	Non-Comp	2011-2012	Kendall Ho Jat Sandhu	Helen Novak Lauscher Liz Heathcote
UBC Faculty of Medicine Technology Enabled Learning	Faculty Engagement in Technology Enabled Learning	Non-Comp	2011-2012	Kendall Ho Dave Lampron Sylvia Lim	Liz Heathcote
BC Ministry of Health, Mental Health & Substance Use Branch	Telehealth/Telemental Health for Mental Health and Substance Use: Literature Review	Non-Comp	2011-2012	Kendall Ho	Helen Novak Lauscher Jennifer Cordeiro
Health Canada, First Nations and Inuit Health Branch	e-Health Infostructure Program Evaluation	Comp	2011-2013	Kendall Ho	Richard Scott Helen Novak Lauscher Sandra Jarvis-Selinger
Public Health Agency of Canada	Intercultural Online Health Network: Developing Live and Virtual Multi-cultural Peer Support Models	Comp	2011-2013	Kendall Ho	Helen Novak Lauscher Elizabeth Stacy
TELUS	eHealth Innovator's Award	Non-Comp	2011-2013	Kendall Ho	Liz Heathcote

Organization



WORKING WITH FACULTY AND DEPARTMENTS

Our Faculty of Medicine and its many departments and schools have great strengths in eHealth activities. eHSO aspires to connect and network with these faculty members to collectively serve the academic mission of optimizing education, research and clinical practice.

EDUCATION AND CHANGE MANAGEMENT

The office will identify strategies to embed eHealth training into health professions education, thereby contributing to capacity building efforts.

COMMUNITY ENGAGEMENT

Our office's continuing commitment to engaging the public through community engagement programs such as the interCultural Online Health Network (iCON), Aboriginal eMentoring, and the high school eHealth summer camps will help us to work toward genuine co-creation of effective eHealth services and knowledge exchange.

INNOVATION AND EVALUATION

eHSO will continue to carry out research and evaluation that contributes to innovative learning, interdisciplinary collaboration and sound evaluation in eHealth to build strong evidence and define best practices for continuous health care improvement and innovation.

Future Directions





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