Research is care, and care is research: Embedding research in the health system

BC has strong health care delivery, exceptional health research, and a vibrant life sciences sector, but we struggle to unite these strengths to benefit our population. In order to provide world-class care, we must embed data-driven evidence and innovation into our health sector. Data-driven innovation enables the health system to discover the best policies, practices and treatments for our population, and to translate and spread best practices across the province. Embedding research and innovation into the health system will require a well-articulated vision for the health research system and an enabling governance structure.

The best-performing health systems are those that integrate research and care. Embedding data-driven innovation into our health system will create an environment that improves prevention, care, and treatment; that will learn from and strengthen our health systems policies; and that will facilitate continuous quality improvement in all aspects of our care system. This will enhance outcomes across the quadruple aim of improving patient outcomes, population health, provider experience, and sustainability.

We must enable quality improvement, research, and innovation across the entire health sector, including clinical care, population and public health, long term care and assisted living, mental health and substance use programs, and others. We must ensure these benefits extend beyond our urban areas, to benefit all regions and populations in BC. In particular, we must learn from First Nations and Indigenous communities to understand the extent of how they want research incorporated in their health systems, and how to do so in a culturally safe and respectful manner.

Patients stress that research is care. Our patient partners have indicated that they believe every health care service interaction should be an opportunity to learn and improve services. In consultations, the public has expressed that they want to be realizing the benefits of the breadth of expertise within our province – and this can occur only by integrating research and health.

The COVID-19 pandemic has led to unprecedented levels of collaboration across the health sector, and we have hard-won successes from this time. However, we have also encountered obstacles due to long-standing, systemic barriers. As a community, we want to leverage our strengthened networks and our lessons learned to achieve the health research system we collectively envisioned in the 2014 Health Research Strategy. This will take strategic leadership and resources from all of us, including government, health authorities, universities, funders, care providers, the private sector, patients, public and others – and we are willing to do it.

Although our coalition has come together under COVID-19, our recommendations address barriers that predate it and are much broader than solely our pandemic response. If we don’t act to embed research into care, we risk more patients receiving suboptimal care, missing out on federal bioinnovation funding opportunities, and losing our thriving biotech companies. The issues outlined in this document impact every person, every clinic, every day.

Below are five recommendations and associated actions for how we as a province can work in partnership to facilitate and enable research that contributes to health equity, patient outcomes and population and public health benefits. These recommendations will help us navigate COVID-19 and potential future pandemics, and they will also serve British Columbians during ‘normal times’, helping us address our services for long-term care, substance use and mental health, and chronic disease as well as meeting population and public health needs, and health system sustainability.
1. **Integrate health and academic systems.**
   - Establish governance structure(s) that formally link health care and academic systems, including joint governance and joint administration.
   - Create clear accountability for academic and health system senior leaders to collaborate to address quadruple aim of health for British Columbians.
   - Enable close relationships between government, health system, and science leaders in the form of a science/technical advisory group to support decision makers.

2. **Reduce chronic operational barriers to health research.**
   - Address inefficiencies in privacy, ethics and operational approvals, and contracts processes, particularly with respect to cross-jurisdictional research by establishing a provincial mechanism. This will require addressing the policies and in some cases the legislation governing these processes.
   - Establish appropriate and seamless mechanisms to facilitate and enable rapid permissions for research.
   - Establish a new approach to health system data custody and control which does not impede execution of mandated provincial clinical care and policy.

3. **Embed data innovation and research into the health system in an equitable and systematic way.**
   - Enable real-time data innovation across the health system, including primary and acute care, long term care and assisted living, and public and population health, to promote equity in access and health outcomes.
   - Create a data-driven and responsive framework whereby research is included in the BC MOH ministerial mandate letter and health authority mandate letters, with clear deliverables.
   - Improve processes to evaluate health care quality improvements and policy innovations, and ensure knowledge translation and spread of effective treatments, protocols and policies.
   - Incentivize research to enable a research-ready ecosystem focused on value-based (cost-quality) prevention, care, and treatment.
   - Provide active support and training for cultural change to bridge the divide between research, clinical, public health, health services, policy communities, and industry.
   - Build capacity across the province by investing in skilled research faculty and staff at every major health care facility in the province and protecting a portion of their time for research.

4. **Ensure research-readiness of the health system.**
   - Build on progress made during the pandemic to create a provincial data ecosystem that is linked across the entire health system and readily accessible through a single governance model, enabling linked data and outcome measurement as standard of care.
   - Integrate research personnel into the health system, including physicians, nurses, technologists, pharmacists, social, data and health system scientists, and research managers, coordinators, and assistants; ensure research knowledge of health system actors, and health system knowledge of researchers.
   - Establish a provincial framework for enabling a systematic (as opposed to individual) response to potential high-quality research with individuals, populations, and the health system.
• Align incentives for researchers, health service leaders, clinicians, and industry.
• Support fundamental research capacity at the health authorities in Decision Support, Laboratory Medicine, Medical Imaging, and Pharmacy Services to better enable multi-jurisdictional research.
• Provide capacity for biospecimen collection and biobanking as standard of care.

5. Enable meaningful collaboration with the private sector.
• Establish system-level partnerships with external health service providers (e.g., community labs, digital health companies) to enable learning through linking biosamples and clinical and health tech data.
• Enable academic institutions, the health system, and the life sciences industry to work together as a comprehensive health sector to develop a pathway to innovation for new treatments and technologies.
• Support the development of scientists with entrepreneurial capabilities and innovation-ready entrepreneurs.
• Incentivize collaborative approaches to solving health problems through tools such as grants and tax-incentives.

The COVID-19 pandemic has clearly demonstrated that the health systems that treat care and research as intersecting activities have produced the best health outcomes – and it has provided us a roadmap to do the same. By integrating health and academia, barriers to knowledge creation are removed and will enable an effective and efficient health sector. Embedding data-driven evidence and innovation, and ensuring the research-readiness of our health system will allow us to maximize our impact on the health of our population, equitably and sustainably. By enabling meaningful collaboration with private service providers and companies, we can ensure that our health sector continues to drive the economy and produce jobs for our province.

Implementing these recommendations now is pivotal to leverage the health sector learnings and collaborative momentum created by the pandemic and for BC to enhance our health sector with federal investments for bioinnovation. It is by embedding research into our health system, and understanding that research is care and care is research, that we can realize the full potential of our health and academic systems, and produce the most sustainable health system for optimal patient and population health outcomes.