Executive Summary

The Michael Smith Foundation for Health Research is facilitating the development of a provincial health research strategy aimed at:

- Identifying specific actions for collaborative implementation by the health research community.
- Providing a framework from which BC organizations can develop their own plans.

This document summarizes five focus sessions held with members of the health research community to discuss five draft directions developed for the strategy.

Common themes emerging across all sessions were:

- **Develop a vision** in which to situate some practical actions — based on transformative outcomes.
- Create the strategy around **provincial enablers** such as platforms for data, clinical trials, and knowledge translation; harmonized processes; incentives; an evaluation framework; mechanisms for dialogue and priority setting; and funding opportunities.
- **Communicate** the importance of health research to key stakeholders.
- **Measure the impact** of health research.
- **Broaden the scope of the strategy** beyond the health-care system and acknowledge that research is conducted on an international stage.
- Build the strategy on as solid an understanding as possible of our **current situation**.
- **Revisit concepts and terminology** to move beyond narrow definitions of education, decision-makers, commercialization, return on investment, and patients.
- **Implement** and **evaluate** the strategy.

Participants noted that broadening the **scope** of the strategy is not the same thing as “doing it all,” and said the strategy should focus on some practical, manageable, feasible and sustainable actions.

Takeaway actions from the focus sessions are:

- Draft a vision and test it as part of the online survey.
- Focus the strategy’s actions on provincial enablers and seek feedback at the next consultation.
- Consider a public engagement action item as part of the BC health research strategy.
- Consider an action for the BC health research strategy related to the development of a provincial framework for measuring the impact and return on investment of health research.
- In the next iteration of the strategic directions, reflect a broader focus.
- To the extent possible, refine the initial situation analysis that was conducted to develop the five strategic directions; modify strategy elements accordingly for the next consultation.
- Rework the five directions according to the focus session discussions.
- Revisit terminology and concepts in the strategy to ensure a broad focus and clear definitions.
- Include implementation and evaluation plans as part of the BC health research strategy project.

Further consultation includes an online survey and regional workshops in which participants will provide input on the emerging BC health research strategy. A final strategy will be developed in summer 2013, followed by an implementation plan.

To learn more, visit [www.bchealthresearchstrategy.ca](http://www.bchealthresearchstrategy.ca).
Introduction

BACKGROUND

Health research and health-care leaders met in 2012 to discuss the potential of a health research strategy to shape a more comprehensive, coordinated, and systems-oriented approach to health research in BC. Participants agreed on the need for such a strategy, and endorsed the Michael Smith Foundation for Health Research to consult with the community and facilitate its development.

The strategy has two aims:

- Identify specific actions for collaborative implementation by the health research community.
- Provide a framework from which other organizations can determine their own priorities, plans and investment decisions.

Preliminary planning included the establishment of an advisory board, a planning team and a reference group as well as a series of key informant interviews. The planning team conducted a high level analysis of health research in BC based on a measurement framework developed by the Canadian Academy of Health Sciences. Key informant interviews and this analysis led to the development of five directions as a framework for further consultation:

1. Support integration of research, care and education.
2. Strengthen linkages between researchers and health system decision-makers.
3. Strengthen the commercialization continuum.
4. Build capacity for patient-centred research.
5. Enhance support for health research.

These directions were developed by working groups to include a rationale, current status (existing initiatives and gaps) and potential actions under each (see Appendix 1). They were discussed in five different focus sessions held from April 29 through May 1, 2013 by stakeholders with a range of experience and expertise relevant to each specific direction.

Further consultation includes an online survey and regional workshops in which participants will provide input on the emerging BC health research strategy. A final strategy will be developed in summer 2013, followed by an implementation plan.

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FOCUS SESSIONS

This report summarizes the discussion from focus sessions that were organized to solicit feedback on the five directions developed as potential framing for a health research strategy. Although each session focused on a specific direction, discussions were held in the context of all five directions. Approximately 20 people attended each session (see Appendix 2). Participants were asked to focus on the rationale, current status, and potential actions in turn, commenting on their accuracy, completeness, and feasibility. This report proceeds with a summary of themes across all sessions, followed by notes on each discussion. Direction descriptions discussed at each session can be found in Appendix 1.

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Findings

COMMON THEMES ACROSS ALL FIVE FOCUS SESSIONS

Participants in all sessions agreed that the development of a provincial health research strategy is an important undertaking and that it could help bring coherence to BC’s health research enterprise as well as enable stakeholders to collaborate and maximize efforts and resources towards shared goals. Common themes across all discussions related to key elements of the strategy from both content and process-related perspectives.

Themes about content:

1. Be visionary

There was a strong call from participants to situate practical actions within an overarching vision. “We have an opportunity to not only make what we have more coherent, but to think about what we want in the future,” said one participant. The word “transformative” came up many times in each session, and resonated with participants. Other comments:

- “What about the notion of something catalytic — something that takes existing resources and does something big and different with them?”
- “We need to strengthen the ‘world class’ theme.”
- “Let’s remember that taxpayers fund this — we owe them a vision.”

Takeaway action:

- Draft a vision and test it in the online survey

2. Create the strategy around provincial enablers

Much discussion about the strategy’s actions centred on provincial “enablers,” including:

- Provincial platforms for data, clinical trials, and knowledge translation.
- Harmonized or common processes for ethics, contracts, privacy impact assessment, and intellectual property assessments.
- Incentives to translate research into practice and to help create a “culture of enquiry”
- A provincial framework for measuring impact and return on investment.
- Provincial mechanisms for dialogue, particularly about priority setting.
- Funding opportunities, both to build and sustain capacity in traditional ways (e.g. personnel programs) but also in new and innovative ways; for example, integrated programs of research across disciplines that span discovery through implementation and include all stakeholders.

Some of the discussion on these enablers focused on the urgent need for the uptake of new knowledge. As one participant said “We have bullet-proof evidence but it takes a series of miracles to get it into practice.” Related to this comment, participants stressed the need to sustain what we put in place, but also to stop doing what is not working.
Takeaway action:

- Focus the strategy’s actions on provincial enablers and seek feedback at the next consultation

3. Communicate the importance of health research

Participants in every focus session talked about the need for a wide range of stakeholders — including the public — to understand the importance of health research and its accomplishments. “This is not just about public relations for funding, it’s more fundamental than that,” said one participant. “We need to think about changing attitudes and perceptions.”

Takeaway action:

- Consider a public engagement action item as part of the BC health research strategy

4. Measure the impact of health research

A strong theme common to all focus sessions was research impact: “We need research on health research,” as one person put it. Participants felt that a greater understanding of how to evaluate the return on investments into health research is needed. Ideally the strategy would recommend mechanisms that could be used at various levels, from organizational to provincial. “Return on investment” was seen as more than financial — it covers health and social outcomes and other impacts.

Takeaway action:

- Consider an action for the BC health research strategy related to the development of a provincial framework for measuring the impact and return on investment of health research

5. Ensure a broad scope for the strategy

Participants in all sessions advised that the strategy should be broad in scope in a number of ways:

- Acknowledge that “health” is about more than the health-care system, and research also focuses on prevention, population health and discovery.
- Acknowledge that research is conducted on an international stage with knowledge and innovation having both global outreach and “in-reach.”

Takeaway action:

- In the next iteration of the five directions, reflect a broader focus

Themes about process:

1. Build from a current situation

Participants in each session urged building the strategy on a robust situation analysis of health research-related strengths and gaps. Capitalizing on the world-class research centres in the province
— looking at them as case studies — was also recommended. As part of this analysis, participants recommended that the planning team review and align with other research strategies (e.g. from universities, research institutes, health authorities, non-profit agencies and government). Participants also recommended a review of health research-related best practices, models and strategies from other jurisdictions. Finally, there was acknowledgement that a robust situation analysis would be difficult due to the lack of common metrics to evaluate the impact of health research and related investments.

**Takeaway action:**

- **To the extent possible, refine the initial situation analysis that was conducted to develop the five directions; modify strategy elements accordingly for the next consultation**

2. **Revisit concepts and terminology**

Participants asked questions about the definition of various terms, and wanted to ensure that they were interpreted broadly. For example:

- **Education:** not only formal degree programs, but also training and learning by researchers, health care professionals, health system and government decision-makers, and the public.
- **Decision-makers:** not only leaders within health care and government; it is perhaps decision-making that we want to influence, not the decision-makers.
- **Commercialization:** too specific and limited for the strategy; participants stressed thinking beyond the goal of simply bringing a product to market: think innovation more broadly.
- **Return on investment and profit:** not just about money, also about health and well-being.
- **Patient:** we should be thinking about people, not patients.

The discussion also made clear that there is overlap among the directions, and that some of the rationale, current status, and potential actions are cross cutting.

**Takeaway actions:**

- **Rework the directions according to the focus session discussions**
- **Revisit terminology and concepts in the strategy to ensure a broad focus and clear definitions**

3. **Implement and evaluate the strategy**

At all sessions, participants warned that the strategy will “sit on a shelf” unless there is a plan for its implementation and a clear sense of who is responsible. They also strongly recommended evaluating its progress and outcomes. Participants were assured that implementation and evaluation plans would be part of the BC health research strategy.

The following pages summarize the discussion in each session, over and above these common themes.
SESSION 1: SUPPORT INTEGRATION OF RESEARCH, CARE AND EDUCATION

In discussing the rationale for direction #1 (see Appendix 1), participants wanted a stronger sense of the purpose: why integrate research, care and education — what is the goal? They also wondered what it would “look like” and encouraged research on the concept itself: “Where is the existing research agenda with regard to such integration?” asked one participant: “What outcomes can we strive for, and how do we maximize the likelihood of accomplishing them?”

Instead of the word “care,” people suggested “practice.” As mentioned in the cross-cutting themes, they also cautioned not to limit education to formal learning, or to health professionals: patients and the public can both learn and teach. On the topic of education for health professionals, though, participants made two points: it’s important to look beyond individual care providers to inter-professional models of care; and don’t forget about people outside the traditional definition of health professionals, for example evaluators, business analysts, planners and so on.

As far as existing initiatives, people understood that although the list was short, providing specific examples would no doubt leave important initiatives out. One participant challenged the term “natural alliances” with regard to relationships between universities and health authorities: there are still many barriers to overcome before these organizations are aligned. Initiatives listed under other strategic direction were raised in this session, making it clear how many initiatives, gaps, actions and even rationales are cross cutting.

With regard to gaps, a high level plan for data linkage and access was seen as missing, as was a clear definition of research-related “roles, rules and responsibilities” among universities, health authorities and government. For example, participants hear conflicting messages about whether health authorities are allowed to invest in research. Several people challenged the gap about delays in implementation of research into practice. “Never mind delays — there are too many cases where it doesn't happen at all.”

Several wording changes were recommended for the listed actions. Possible additions discussed were career transition awards, research on networks (how they form, how they work), and support for research on complex problems using non-traditional methods. Mechanisms to involve clinicians in research, and a mechanism for priority setting between health authorities and the Ministry of Health, were also mentioned as important. Government would ideally harmonize their requests for research, said some — including all ministries involved in health research.

SESSION 2: STRENGTHEN LINKAGES BETWEEN RESEARCHERS AND HEALTH SYSTEM DECISION-MAKERS

Participants discussing direction #2 (see Appendix 1) focused a great deal on knowledge translation — including the possibility of using a knowledge translation framework for the overall strategy. Ultimately, they came to the conclusion that we should be talking about research and decision-making, rather than the people who do these activities. As written, the direction statement seems focused on individuals — and at that, individuals who may not need to be involved in the decisions. “What we really want is evidence-based decision-making,” said one participant. “That might be a knowledge broker type of role in some situations.” People also suggested creating a taxonomy: many people make decisions about health and health care.

As far as existing initiatives, again, people acknowledged that it would be impossible to create a list of every undertaking aimed at strengthening the linkages between researchers and decision-makers.
In discussing the gaps, people noted how timelines differ between the work of researchers and decision-makers. The gaps also lack recognition of complexity, said others. It was noted that health-care professionals do not have many opportunities to get questions on the table: “They may not be academics, but they have some really interesting research topics that could be looked at.”

Participants felt that the actions could be tightened somewhat. Additional actions included mechanisms to determine what is and what is not high quality evidence; building in practice to research training, so that students spend time in a decision-making environment; and reviewing successful models of government involvement in evidence-based decision-making. It was emphasized that incentives are necessary: unless researchers and decision-makers are recognized for contributing to evidence-based decision-making, most will not do it because of competing priorities. Several people wondered about the possibility of a provincial platform, with a structure and “institutional memory” — and gave the Manitoba Centre for Health Policy as an example. “We need some way of matching research questions with expertise,” said one person. Others agreed, but emphasized the concurrent need for priority setting mechanisms: “The list of research questions would be impossible to manage, otherwise.”

One person, although in favour of a provincial mechanism, cautioned against a fully centralized construct, and encouraged a focus on spread of best practices.

**SESSION 3: STRENGTHEN THE COMMERCIALIZATION CONTINUUM**

Like participants in session two, the group discussing direction #3 (see Appendix 1) struggled with the wording. “Why is this about commercialization?” said several. “It should be about innovation more broadly.” Others agreed, and debated the idea of this direction being worded more along the lines of an innovative health technology economy. Most people agreed with this idea, but cautioned that the word “technology” can be narrowly conceived.

In discussing the rationale, people noted its focus should be on the well-being of British Columbians.

Participants reacted fairly strongly to the section on existing initiatives. “Some key resources exist; we need to enumerate our assets,” said one participant: “Harness the 30 or 40 things that are already happening, and take them further.” Case studies are important, agreed others — and “don’t underestimate the power of a forensic analysis on failures.” People noted the absence of BC’s technology transfer offices, which are said to be among the best in the country.

On the topic of building on what we have, beyond specific initiatives participants noted the “ethos around our ability to come together to address the big questions — highlight the seamlessness.” Don’t forget the importance of leverage, said one person: “Look at the Centres of Excellence for Commercialization and Research — 11 in the past five years and the whole essence is leverage.”

Participants urged that the development of any actions for this direction be based on a robust analysis of the current situation. “Provincial enablers” were the focus of much discussion. Participants felt that BC could be a “research lab writ large” with the right support, including core platforms such as genomics, informatics, data and clinical trials. Another enabler discussed was government policy, including that related to a more favourable tax environment. “With its single payer system, BC could be a good testing ground — we could help companies get in front of the payer.” On a more philosophical note, an important enabler is shifting away from the current environment of risk aversion in academic institutions, which is a barrier to innovation.

Highly qualified personnel training and support, as well as funding for translation research, were seen as key actions. “We need to attract people who move discoveries down the path.” Another idea was a
team of “scouts” to look for opportunities. People also noted the importance of mechanisms to engage with the Ministry of Health and health authorities to find out what kinds of problems need to be addressed. “This whole sector needs a communications and government relations strategy,” said one participant.

It is also very important that we build our capacity for uptake of new innovations, said participants. “And remember that receptors are not only in BC but are national and international.”

Participants ultimately liked the idea of a continuum but cautioned that it is not linear, and it is currently full of gaps. “We need help — one organization cannot have expertise in all these areas.” People cautioned that we need to be aware of certain realities, including the economy, and the lack of available venture capital. One person advised exploring the “funding ecosystem”: “it is not just about venture capital, there is government too, and if you are focusing only on the Ministry of Health they will see innovation as a cost driver.”

Finally, people mentioned that commercialization — or innovation — is not just about drugs, but includes medical technology and devices, engineering solutions, e-health applications and other innovations.

SESSION 4: BUILD CAPACITY FOR PATIENT-CENTRED RESEARCH

All participants acknowledged this direction #4 (see Appendix 1) is complex. People struggled with the word “patient,” preferring “person.” However, they did not like the idea of focusing on individuals, as opposed to families and communities and populations. Therefore, the advice was, even though we are talking about a “person-centred” approach, we need to acknowledge that it’s the person in the context of his or her broader experience.

The existing initiatives section was noted as a good but incomplete list. One notable absence that could be helpful is patient quality review boards. As with other sessions, people noted it would be difficult to list everything that is underway in BC related to patient-centred care and research. The problem seems to be more about the lack of connections between and among these activities, which is seen as a major gap that was not noted in the direction description. For example, there are many examples of patient reported outcome measures (PROMS) — but how do we collect these in a systematic manner?

Other gaps included the use of — and training on — a broader scope of research methodologies that better capture the patient experience — and education on same. Also absent is training on evidence-based decision-making for the public. Knowledge translation and implementation were noted as the biggest gaps. However, said one researcher, it is very difficult to focus on meeting health authority and government needs around knowledge translation when one is trying to maintain a robust research program at the same time. This comment was echoed by others, and speaks to the need for support for research capacity.

As in the session on linking researchers and decision-makers, several participants said that front line care providers are in an excellent position to generate patient/person-centred research questions, but there are few mechanisms to take them anywhere. The public is also in an excellent position to generate relevant research questions. On that note, getting patients involved in research through consent to contact programs was noted as important. It was also emphasized that the public needs more than knowledge about evidence; they need help with confidence- and skill-building in order to change behavior. Participants cautioned against forgetting about populations that are marginalized and do not have a voice, as well as informal caregivers such as family members.
Noting that the public already has access to and expertise on a wealth of evidence about health and health care, participants wondered why they are not at the planning table in exercises such as this.

**SESSION 5: ENHANCE SUPPORT FOR HEALTH RESEARCH**

Participants in the discussion about direction #5 (see Appendix 1) felt that the strategy needed to be stronger in terms of research on prevention, population health, social determinants of health, and social policy. “There needs to be reference to marginalized groups and the burden of illness in general” said several people.

“Discovery” or basic research was also seen as needing to be strengthened: “The language is very goal and outcome oriented — how do we ensure we are supporting discovery itself?” said one person. Others agreed, but said that ideally even these researchers would have more opportunity for discussion about and collaboration on the major problems facing society in order to address them.

Participants felt that the rationale needed more emphasis on the importance of attracting highly qualified personnel into universities and health authorities, which is vital in order to build and maintain a research enterprise. While all acknowledge this as important, it was stressed that we need to know much more about the impact of building research capacity. “We need research on health research.”

Under existing initiatives, participants suggested the addition of university investment in health research. Universities in turn are supported by government, but also by donors, through capital campaigns. Donors are also important contributors to health research through non-profit agencies.

Another existing initiative to add is the distributed medical school, which offers huge opportunities for training. People also thought there needed to be mention of the national and international research leaders in the province. One person said 85 percent of research takes place in health authorities — an important fact to remember when talking about “enhancing support for health research.”

Issues to come to terms with on this strategic direction include the balance of support across the four pillars of research: biomedical, clinical, health services, and population health. Another issue is to what extent should we invest in established excellence as opposed to building capacity in areas that have little now, but hold potential? In this regard, participants noted the importance of reviewing universities’ strategic health research plans to build on what is already underway.

An important gap, said several people, is in key stakeholders’ understanding of the time it takes to realize return on investment in health research. Another gap is a mechanism for prioritizing what research needs to be done. Participants talked about the fact that researchers and others who have the “ear” of influential people tend to get their work funded. “Is there an opportunity to speak with one voice to government about some of the needs and priorities?”

Participants made several suggestions for wording changes to the actions. As far as additions, it was noted that researchers and their departments still tend to work in silos: could opportunities to work across disciplines on research themes or complex problems get people working together better? Another action mentioned was support for national and international networks: “We’ll never have everything we need in BC.” Finally, people thought that the public should help set and contribute to research agendas, and recommended reviewing the literature on community engagement.
Conclusion and Next Steps

Health research in BC has led to improvements in health, life expectancy, and quality of life. While gains have been made, more needs to be done to improve the impact of BC’s health research enterprise. The purpose of the health research strategy is to bring a more coherent, strategic approach to health research in BC.

This report summarizes the discussion from the focus sessions held April 29 – May 1, 2013 with members of the health research community. The information from the sessions will inform the next consultation phase, an online survey for broader stakeholder engagement. The survey will solicit feedback on the emerging strategy and action items built from the first two consultation activities — sketching out the five directions and the focus sessions.

Following the survey, there will be regional meetings to seek input and advice ensuring that the strategy speaks to the needs across the province. The aim is to have the survey launched at the end of May 2013 with the regional meetings taking place in the latter half of June 2013.
Direction 1: Support integration of research, care and education

Rationale

There is mounting evidence from around the world that some of the best health-care is delivered in environments where active research is also taking place. These environments attract the brightest minds among health-care providers — those who are eager to learn, to innovate, and to improve. These settings can be academic health science centres where clinicians can participate in investigations that translate knowledge from “bench to bedside.” But they can also be community settings where health care providers are continuously seeking to improve care through research.

Pairing research and care with education takes knowledge translation a step further. It means new ideas are constantly being brought to practice settings by teachers and learners, and the wisdom of experience and expert practice is passed on to new generations of care providers and managers as well as back to those who are designing education curricula.

Environments where research, care and education are integrated enable more rapid application of evidence to practice and policy. They also allow us to study and learn from the implementation of new ideas and knowledge. Innovations can be modelled, tested, and experienced by new and established practitioners and managers, thereby helping close the gap between learning about these innovations, and actually experiencing them.

Bringing teaching, research and practice closer together helps to inform and improve health human resource planning as those charged with educating health-care professionals have a clearer sense of the future requirements for knowledge and skills. Integrating research, care and education can also lead to streamlining of administrative and decision-making structures and processes when leadership for academic and service delivery programs can be effectively aligned.

Current Status

Existing initiatives

In supporting linkages among the academic research, education and service provider communities, there are many existing initiatives in BC to build on, including:

a) The natural alliances that exist between the four research-intensive universities and the province’s six health authorities: UBC with PHSA and VCH; SFU with Fraser Health; UNBC with Northern Health; UVic with VIHA; and UBC Okanagan with Interior Health. These alliances have resulted in unique initiatives designed to meet needs in each region.

b) UBC’s Distributed Medical Education Program, which has given rise to multiple teaching and learning opportunities across the province.

Gaps

a) The academic system (how we teach care providers) and the health system (where they practice, often in inter-professional teams) are not fully aligned.

b) Health human resource planning is not coordinated across BC.
c) There are delays in implementation of health research into policy and practice — and lack of understanding on why and how to promote and accelerate implementation.

d) Infrastructure for research at some non-university settings is limited.

POTENTIAL ACTIONS

Some actions that would help improve the integration of research, care and education include:

a) Build upon existing partnerships between universities and health authorities, expanding them into a formalized province-wide network.
b) Build a common and mutually reinforcing agenda for health research between the Ministry of Health, and Ministry of Advanced Education, Innovation and Technology.
c) Capitalize on government's investment in BC's distributed medical school by supporting collaborations among medical programs and their local universities and health authorities.
d) Support and build upon existing health authority efforts to build capacity for health research.
e) Accelerate the implementation of prevention and clinical care best practices through the creation of networked centres for research, care and education in high priority disease areas.
f) Deploy health professional career awards for researchers embedded in the health-care system.
g) Develop a framework to measure the outcomes and impacts of the integration of research, care and education — how do we know it is working and how do we improve?
h) Support research on how health-care practitioners work best together, in order to promote ongoing learning.
Direction 2: Strengthen linkages between researchers and health system decision-makers

RATIONALE

To be effective leaders and stewards of the health system, decision-makers need to know what actions to take, how to take them, and how well they are working. However, decision-makers all too often don’t have access to the actionable research evidence they need. Even if research evidence exists, decision-makers need help in translating and implementing it in a way that suits their particular requirements.

Strengthening the linkages between decision-makers and researchers can help change this situation. To have a meaningful impact, these linkages need to be sustained over time so that decision-makers and researchers come to understand and appreciate the realities of each others’ work. Establishing and sustaining relationships between those in the decision-making world and the world of health research can improve both the quality and the relevance of the research undertaken. Decision-makers can help researchers identify areas of inquiry that are important to them. Researchers can help decision-makers frame the right questions and “translate” or apply the answers to particular circumstances and settings. Working together in this way, decision-makers and researchers can greatly enhance the relevance and impact of health research.

CURRENT STATUS

Existing initiatives

a) Considerable activity is underway in BC aimed at bringing decision-makers and researchers closer together to define and answer questions of importance to the health of populations and the health-care system. These activities span the continuum from highly formalized arrangements (e.g. research institutes within health authorities) to informal collaborations.

Gaps

a) Efforts related to connecting researchers and decision-makers are not well coordinated at the provincial level, nor well known among all those who could benefit.

b) While health research funding agencies require partnerships between researchers and decision-makers, too often these are simply loose affiliations for the purposes of meeting funding submission requirements.

c) Partnerships are difficult to sustain due to the frequent turnover of decision-makers.

d) While there may be a large body of evidence on issues of concern, knowledge users and health system decision-makers do not often have access to actionable and relevant research.

e) Personal skill, infrastructure and cultural challenges are gaps for both knowledge users looking to implement research, and for researchers looking to work with knowledge users.

f) Building the trusted relationships that are required to underpin true collegial engagement requires dedicated time and effort not currently accommodated in the health research system.

g) The current academic promotion system does not adequately reward knowledge translation activities by researchers; and unless research is part of workplace culture and/or job descriptions, there are no incentives for non-academic research partners.

h) Decision-makers and researchers do not always have a good understanding of one another’s needs and there is often a lack of mutual appreciation of what each party brings to a research endeavor.
POTENTIAL ACTIONS

Some actions that could help to strengthen the linkages between researchers and health system decision-makers include:

a) Reach common agreement on the goals of such linkages.

b) Create provincial fora for decision-makers and researchers to come together to discuss issues of priority for BC.

c) Develop a program that embeds applied researchers in practice settings and decision makers in research settings so that the cultures can be cross-pollinated.

d) Further encourage collaboration between researchers and decision-makers through policy fellowships.

e) Develop a program to train researchers and decision-makers on how best to work together — including how to develop research questions — supporting them on an ongoing basis, and setting expectations for outcomes of these collaborations.

f) Develop innovative trainee programs that enhance capacity of students, practitioners and decision-makers to plan, do and interpret research.

g) Create funding mechanisms that better match government’s priority research questions with the expertise and innovative capacity in our academic institutions. Specific mechanisms are needed that link immediate, intermediate and long-term evidence needs to the research expertise and methodology available in BC and beyond.

h) Align research with current government efforts to advance health technology assessment so that government can make more informed decisions and learn from the implementation of policy decisions.

i) Create opportunities for collaborative research priority-setting among investigators, practitioners, and community leaders from sectors that impact on the health of individuals and communities.
Direction 3: Strengthen the commercialization continuum

RATIONALE

Governments can play critical roles in helping to stimulate growth in certain sectors through the policies they adopt to create favourable investment climates for industry. One of the most significant contributions governments make is in building the knowledge infrastructure through funding to universities and other post-secondary institutions. The province’s universities and colleges help to grow the talent pool of expert scientists, entrepreneurs and leaders — and these people contribute to some of the groundbreaking discoveries that spin off into commercial ventures. In this regard, the investment in post-secondary institutions and training of graduates would be maximized if there was a greater “receptor pool” of organizations for employment.

The private sector’s decisions about how best to deploy their investments depend on a clear understanding of the needs of the health system. Creating opportunities for linkage and exchange between public and private institutions in the health research field can help to ensure that products and technologies being developed address current and anticipated needs.

The BC government has invested more than $900 million in health research since 2001 and created and supported opportunities for BC’s life sciences industries to take root. Having these industries in the province increases the opportunities for British Columbians and indeed all Canadians to take advantage of new, cutting edge treatments and diagnostics as soon as they are approved for use. Providing a place where they can be trialed and tested also improves the chances of beneficial new products and processes being implemented early in the province. When these can be shown to improve efficiency and effectiveness of treatment and care, they can contribute to better health outcomes and improved cost-effectiveness. As well as health care benefits, there are also significant economic and social advantages to strengthening the commercialization continuum, as the strength of the life sciences sector is becoming an increasingly significant differentiator among jurisdictions.

CURRENT STATUS

Existing initiatives

BC has numerous organizations and programs that can be leveraged to enhance the commercialization continuum:

b) University-based industry liaison offices (e.g. University Industry Liaison Offices at UBC and UNBC; Innovation Office at SFU; the Industry Partnerships Office at UVic; the Applied Research Liaison Office at BCIT; and the Technology Development Office at PHSA).

c) The work of the Centre for Drug Research and Development: an integrated development and commercialization centre that provides expertise and infrastructure to enable researchers to advance promising early-stage drug candidates.

d) Partnerships between health authorities and private companies (e.g. Telus Health, Cerner, PeopleSoft, Accenture) on enterprise systems.

e) Funding agency programs that help build bridges between the public and private sectors.
**Gaps**

Some of the gaps to be addressed by strengthening the commercialization continuum include:

a) Government has not defined its direction for funding foundational scientific research and for enhancing the policy environment to attract investment into these priority areas.

b) The “right” level of public investment in discovery research is not well defined. Unlike the private sector, which adopts a “fast failure” rule for decision-making regarding research investments, public funding of discovery research is not well bounded by decision rules regarding investment/de-investment.

c) The private sector and public health system at present are not well aligned, resulting in innovations being introduced in an *ad hoc* rather than a deliberate and concerted manner that serves demonstrated patient and system needs. The result is a culture that sees innovation as a cost driver rather than a problem-solver.

d) There is a lack of access to venture capital in BC, and more broadly, Canada.

e) BC and Canada represent a relatively small commercial market despite making a relatively large academic contribution.

f) Many companies conduct their research outside of the province for financial reasons, available expertise/knowledge infrastructure, and/or capacity (e.g. clinical research).

**POTENTIAL ACTIONS**

a) Develop a provincial scientific strategy for prioritization of key areas of health research with relevance to commercialization.

b) Create industry fellowships focused on bridging discovery with translational research and preferably bridging academic organizations with industry.

c) Ensure ethics and contract harmonization and a province-wide clinical data management platform to attract clinical trial and clinical research activity to BC.

d) Develop a robust data access policy allowing the usage of health linked databases in BC (could be a competitive advantage for BC) to accelerate recruitment efforts for clinical trials and help foster an environment where BC citizens are actively engaged in clinical research.

e) Maintain the pipeline of innovative ideas by supporting discovery, translational and development stage research in our academic institutions.

f) Define and enable key initiatives with commercial potential that are focused on improving delivery of cost-effective and innovative health care.

g) Further cross-sector, cross-ministry and inter-jurisdictional dialogues that lead to a deeper understanding of the needs, gaps and opportunities to strengthen the commercialization continuum within health.

h) Strengthen linkages with the health technology assessment process that is currently being implemented at the health authorities.
**Direction 4: Build capacity for patient-centred research**

**RATIONALE**

*Health research* includes everything from basic science to population studies of the impact of social and economic factors on health and well-being. Health research can also be considered a continuum that can extend to include the analysis of administrative data to evaluate the impact of various interventions and policy changes. *Patient-centred research*, however, focuses on the person in context of the health-care system. It spans the spectrum from clinical research (in hospitals and other clinical settings) to health services research (involving policy- and decision-makers and health-care practitioners) to community-based research.

All too often, health research is focused on diseases, on body parts, or even on modes and sites of delivery. In contrast, patient-centred research starts and ends with the person in the context of the health-care system. It addresses such questions as:

- What outcomes matter most to patients and their families? How should we address and measure these?
- How do we best support health-care needs through all stages of a person’s life?
- How do we ensure that the patient’s journey through the health-care system is seamless at transitional points of care?
- How do we measure the impact of provincial health-care initiatives in a way that is meaningful to front-line workers, administrators, funders, and the public?
- How can front-line workers, administrators, decision-makers and the public work best together to ensure that access to evidence-based care is equitable and appropriate for individual patients?
- How do we “spread” proven interventions to ensure appropriate access for all patients who would benefit and, conversely, how do we ensure inappropriate and ineffective interventions are discontinued?

Admitting people as patients into the research priority-setting process to address these types of questions helps ensure the relevance of health research. Relevance of health research is also increased when policy- and decision-makers and health-care professionals responsible for addressing patients’ needs have input into research priority setting.

Armed with solid, reliable research evidence, patients — and their families and informal care givers — are better equipped to make informed decisions about their health and the range of options for health-care and social interventions meant to address their needs. Such evidence is foundational to decision-making by health system leaders and to effective care by health professionals.

A patient-centred approach to health research improves the chances that health-care interventions will have the desired impacts on patient outcomes, positive patient and provider experiences, health-care quality, and system cost effectiveness.
CURRENT STATUS

Existing initiatives

In advancing patient-centred research, there are several initiatives on which to build:

a) Patient networks at the provincial and health authority level (for example, Patients as Partners within the Ministry of Health, patient advisory committees within each health authority).
b) Linked administrative and clinical databases that allow patient experiences to be tracked across the system.
c) Clinical registries.
d) Patient experience survey mechanisms.
e) Initial work on the Canadian Institutes of Health Research Strategy for Patient-Oriented Research programs: networks and SUPPORT Units.

Gaps

a) Patient engagement is inconsistent/not always valued.
b) Public values are not always considered in planning and priority setting for research.
c) Lack of financial and other supports for health professional scientists.
d) Health data issues: data are not fully shared among stakeholders, current data systems are fragmented.
e) Lack of unifying clinical research platform across BC.
f) Findings from clinical research are not easily translated into practice.
g) Patient-centred measurement tools (e.g. patient-reported outcome measures) not being used systematically.

POTENTIAL ACTIONS

a) Develop a consensus definition of patient-centred research.
b) Engage patients in the research process by:
   i. Ensure that training and funding is in place for patients to be truly engaged in research process.
   ii. Support existing patient voices and patient advocacy groups and build more.
   iii. Make patient research partners a requirement of grants.
   iv. Create a forum for non-governmental organizations and health charities to gain a better understanding of patients’ needs/how to engage patients in research.

c) Create funding opportunities such as:
   i. Salary awards to support clinician scientist researchers.
   ii. Specific funding for patient-centred research.
   iii. Use the opportunity provided by the Strategy for Patient-Oriented Research to enhance the infrastructure and expertise that supports patient-centred research and evaluation.
d) Enhance data collection and stewardship.
   i. Develop a provincial strategy to capture patient-centred measurement activities.
   ii. Link multiple clinical and population health databases to enhance the power, scope and relevance of inquiries.
   iii. Improve appropriate access to data for patient-centred/population-oriented health research.
Direction 5: Enhance support for health research

RATIONALE

The purpose of health research is to generate high quality knowledge that can be used to promote, restore, and maintain our health. Health research is also an important catalyst for economic development, creating jobs, attracting investments to BC, and keeping our families and our communities healthy and productive. To maximize its potential, health research requires a solid foundation — an infrastructure with the necessary people, spaces, databases, equipment, and tools.

CURRENT STATUS

Existing initiatives

a) Personnel and infrastructure funding under MSFHR, provided by the Ministry of Health, to help build capacity for health research and its translation.

b) BC Knowledge Development Fund, funded through the Ministry of Advanced Education, Innovation and Technology, matching federal and private sector investments to help leverage funding for needed capital infrastructure.

c) Genome BC, funded by the BC government and by Genome Canada, investing in and managing large-scale genomics and proteomics research projects, and supporting enabling technologies in human health and other sectors.

d) Funding by the Canadian Institutes of Health Research, Canada Foundation for Innovation, federal Networks of Centres of Excellence, hospital and health-care foundations, non-profit organizations and the private sector, including medical device and other life sciences companies.

e) Provincial government investments that have successfully leveraged greater than ten-fold matching contributions from foreign, non-profit, federal government and private sector sources.

f) Significant growth in health research in BC, with excellent researchers choosing to make BC their home, more positions for post-secondary students to pursue advanced degrees, and hundreds of high quality jobs for skilled research support personnel.

Gaps

a) Funding programs exist for personnel and infrastructure, but are disjointed. There is a lack of understanding of what gaps should be filled in order to have a strong foundation for the research enterprise as a whole.

b) An overall framework, including indicators and metrics to measure the impact of investments into health research, is missing.

c) Without the ability to measure impact, it is difficult to identify the greatest need for further support in terms of programs (e.g. individual personnel, teams, shared platforms, etc.), and in terms of how to strike the balance of discovery or “open” vs. targeted or strategic funding. It is difficult to tell where the greatest opportunities for return on investment are, for example funding that can be leveraged to bring in funds from the Canadian Institutes of Health Research and other sources.

d) With increasingly constrained budgets, the ability to not only measure, but to demonstrate — to capture and communicate — the impact of public dollars spent gains in importance, so that health research funding can be maintained and increased.
POTENTIAL ACTIONS

a) Develop a provincial vision for how personnel and infrastructure (networks, platforms, resources) support can benefit BC’s health research enterprise. As part of the vision:
   i. Explore how best to integrate existing and new infrastructure resources and manage them ongoing.
   ii. Explore the possibilities of alliances beyond BC (western Canada, national, international).

b) Develop a comprehensive approach to the measurement of health research impacts across all Canadian Academy of Health Sciences framework impact areas, including a framework, indicators, metrics and an implementation plan. (See Figure 1 on page 2.)

c) Capitalize on federal government and private sector opportunities by maintaining sources of matching funds.

d) Explore opportunities for cross-sectorial co-funding of health research capacity building initiatives (personnel and infrastructure): public, private, non-profit.

e) Accelerate efforts to harmonize research ethics review (BC Ethics Harmonization Initiative).

f) Develop new, innovative training programs that foster all aspects of knowledge generation, translation and implementation.

g) Create opportunities to strengthen health research through links with research in other sectors including from cultural, social and environmental studies, to advance knowledge about health promotion and disease prevention.

h) Engage public and MLAs in dialogue about benefits of health research – and about the realities of its time frames.
### Focus Session Participants

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