

Implementation of Healthy Living as a Core Program in Public Health: Final Report

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1 Main Messages

The objective of this project was to explore how implementation of the Healthy Living Core Program was happening in two health authorities in BC, and how geographic and organizational contexts had an impact on that implementation. Most importantly, we sought to investigate the part that ‘evidence’ played in implementation – how ‘evidence’ was defined by both front-line and management staff, how it was accessed, and how it was used in decision-making. Below we share the key messages that have emerged from the work of this study, lessons for decision-makers and ideas for further research:

- A population health approach that incorporates consideration of the social determinants of health is essential for implementing and evaluating healthy living initiatives. Such an approach allows health authority staff working in diverse locations and conditions to adapt programs to the needs of their communities.
- Community development is an essential role for front-line public health staff, and integral to this way of working is the existing community partnerships and networks when implementing healthy living initiatives. The coordinating or networking role of public health staff is essential to avoid confusion and make the most of the set of diverse strengths that complex professional networks can provide.
- Public health staff need to be given the time to gather and reflect on evidence as it relates to their work in healthy living. This is legitimate work and it should be supported.
- Evidence comes in many types of formats, including academic research, informal or formal evaluations of community-based programs and policies, stories and experiences of public health staff and community leaders.
- It is challenging for public health staff to both collect and interpret standardized process and outcomes evaluation indicators of healthy living initiatives; they must be tailored to each particular community's context.

Lessons for Decision-Makers

- Community development and partnership/networking skills should be supported as a key competencies within health authorities through enhanced training and resourcing.
- Diverse types of evidence are used by staff to shape programs and make policy decisions, and all should be considered valid. Evaluations framed with a macro-perspective need to be funded.
- The practice of using evidence is groomed during staff's professional training and needs to be encouraged and enabled as part of the work day. While a ‘culture’ of evidence is often assumed to be active in the workplace, public health staff require technical and tangible support to engage in evaluation practices and evidence-informed work on a daily basis.

Further Research

- Because political and financial contexts change over the implementation period, prospective and participatory studies to capture the implementation experience in its entirety – documenting the mix of evidence use, and definition/collection of indicators – is required to fully comment on public health delivery of healthy living initiatives.
- Further, given the network of players involved in the delivery of healthy living initiatives – a network that ebbs and flows – we need to identify the best role for health authorities to occupy to minimize duplication, fill-in gaps and maximize the impact of services.

1.2 Executive Summary

Chronic diseases comprise the most significant health issue facing Canadians: diseases that are enormous in scale, rooted in complex behaviours, influenced by multifaceted variables, and that require both upstream and downstream long-term solutions.¹ In response, the public health agenda has broadened its focus from infectious disease and acute care to address primary prevention and social determinants of health. Yet, critics argue that intervention methodologies have not kept pace and continue to emphasize and evaluate micro, or individual level factors. Further, there is debate as to the relevance of 'best practice' evidence acquired through traditional science, and how it is adopted, adapted or disregarded by practitioners. In a recent refit of the BC public health responsibilities, 21 key public health functions were identified, defined and described as the core components of a comprehensive public health system. As one of those core functions, Healthy Living defined strategies related to a healthy diet, a physically active way of living, and not smoking.

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The purpose of this study was to understand the implementation experience of the recently adopted Healthy Living Core Function (focusing on physical activity, healthy eating and tobacco cessation/reduction) within two BC health authorities – Vancouver Coastal Health (VCH) and Vancouver Island (VIHA). Specifically, the study explored the issues influencing and informing the decisions made by health authority staff about what exactly to implement and what to leave to others, the research to rely on, and the information to collect as evidence of their own.

Using a mixed-method approach to capture multiple perspectives, data were collected through document review, participatory observation, assembly of an Environmental Scan, personal interviews, and a web-based survey. Interpreting these data separately, and then most importantly in their totality, we found six main themes to emerge:

1. *Big picture thinking.* Resisting a long history of interpreting 'healthy living' as a mandate to deliver individual behaviour change and health education interventions, VCH and VIHA staff adopted a population health framework which provided a key orientation to the implementation of their healthy living initiatives.
2. *Partnering within and beyond.* This study was set in a period of time during which the BC political attention and investments resolutely focused on hosting the 2010 Winter Olympic Games, and significantly framed the backdrop for the VCH and VIHA implementation experience. As a result, within just these two health authorities, we identified 139 initiatives delivered by a long list of other organizations, either in collaboration with a health authority as a partner, or independently. With the exception of tobacco reduction, which was primarily the responsibility of the health authorities, partnerships between other governmental and non-governmental organizations characterize the delivery of physical activity and healthy eating opportunities. Interview participants recognized the necessity of such participatory engagement in order to minimize duplications and extend their reach of service. As well, efforts to collaborate within each health authority to integrate the physical activity and healthy eating components were noted, despite the institutional and bureaucratic hurdles present within the structure of the health authority.
3. *Implementation as assimilation.* We interpreted this primarily related to the implementation of tobacco cessation/reduction activities as weaving or fitting into the existing programs and service delivery of traditional public health responsibilities, rather than creating new programs or policies as a result of the Healthy Living Core Function.
4. *Tacit practices and knowledge transition.* We found public health staff, particularly front-line practitioners, to be drawn to grassroots and local 'lived experience' evidence. This tacit wisdom, in combination with evidence from academia and clinical evidence accessed through disciplinary/professional networks, offered a knowledge transition or transformation opportunity to

inform decision-making, rather than what can be characterized in the literature as unidirectional knowledge translation.

5. *Instrumental and conceptual use of evidence.* Health authority staff responsible for the implementation of the Healthy Living Core Function relied on both instrumental and conceptual use of evidence. Tobacco reduction is an example of the former where evidence directly influences their shaping of policy and practice. With physical activity and healthy eating initiatives, practitioners find it difficult to identify concrete examples of any visible influence of research on their work, although they are able to describe conceptually how research informs discussions, motivates new ideas or improves their understanding of issues in their field.
6. *The plight of indicators.* Our participants described the challenge with interpreting and gathering measures and indicators for their community efforts, relevant to both the process of implementation and outcomes. This was particularly true for work in rural communities or with isolated/vulnerable populations in which and for whom standardized indicators held little accuracy.

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Our study has provided a momentary glimpse into the early implementation experience within two health authorities. Our findings, echoed in the literature, point to the conclusion that issues concerning evidence and its use demand further attention. Clearly, more than evidence is needed to inform decisions around the delivery of healthy living initiatives within public health. Indeed, evidence alone may not be sufficient to obediently translate as a policy or programs. What else do health authority staff need to make sound judgements about what to implement and what to leave in the hands of community partners? Further, if public health is to achieve its mandate for healthy living as a core function, a population health and community development/intersectoral collaborative paradigm and orientation must be embraced and supported within the institution.¹ Again, this is not a dilemma exclusive to our experience: Smith and Petticrew² describe this paradox in the UK as “a call for macro-level interventions using micro-level analysis” (p. 4) and plead for public health to ‘see the wood as well as the trees.’

Main Report

2 Context

This is a challenging time for the public health field in Canada. Chronic diseases comprise the most significant health issue facing Canadians: diseases that are enormous in scale, rooted in complex behaviours (e.g., eating and physical activity practices), influenced by multifaceted cognitive, inter-social, cultural, economic and environmental variables, and that require both upstream and downstream long-term solutions.¹ Such complex health issues demand layered and coordinated interventions at the community level. However, finding solutions that are valid, reliable, transferable and promptly adopted represents a daunting task for health promotion research.

We know that converting science into action is critical to guide those efforts to improve population health.³ Unfortunately, it has been noted that it takes on average nine years for 'best practices' established through research and disseminated through the literature, guidelines or textbooks to be fully implemented.⁴

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There is increasing demand for public health practitioners to deliver evidence-based practice,⁵ yet many continue to find it difficult to access, interpret and adopt health promotion research that could serve to help guide their work.⁶ Case studies that are based on "actual real world implementations"⁷ (p. S230) are needed to accommodate for unique practice settings and local culture. This is particularly true for population health research when practitioners may struggle to apply upstream solutions to "the confines of their day-to-day service environments, and specialized mandates that tend to focus on interventions to control downstream risk behaviours"⁸ (p. 133). To better support health promotion practitioners in community-based settings, we need a better idea of the types of evidence required, in formats that are readily accessed and incorporated into their daily work.

2.1 BC's Framework for Core Functions in Public Health

Recently, reports have identified the need for the public health infrastructure to be strengthened in order to meet public health goals of promoting health, preventing disease, prolonging life, and improving quality of life.⁹ In response to these concerns, Population Health and Wellness, British Columbia Ministry of Health (now part of the Ministry of Healthy Living and Sport) introduced *A Framework for Core Functions in Public Health*¹⁰ identifying 21 key public health functions that define and describe the core components of a comprehensive public health system. One of the hallmarks of the Framework is its evidenced-informed basis designed to guide public health practitioners' work within their local contexts. The focus for this study is the Healthy Living Core Program, which includes strategies to improve levels of knowledge, skills, and health-related behaviours, in the areas of tobacco reduction/cessation, healthy eating, and physical activity.

2.2 Challenges with the Use of Research and Other Types of Evidence

Much of the experience with implementing behaviour change initiatives is fraught with challenges of translating the knowledge about interventions that have been successful in optimum conditions to real-life contexts.¹¹ External validity issues related to uptake of healthy living initiatives are rarely reported on in the research literature, where a debate continues about the most effective means to support the transition from evidence into policy and practice.¹² The available research highlights the difficulties with adopting "best practices" that simply do not meet community needs or oversimplify community realities.^{13,14} Those responsible for the implementation of policy or programs make adaptations to standardized programs, so that those programs better fit their particular setting, in terms of the availability of resources, compatibility with organizational and professional values, expertise, knowledge, and program users. Issues with the credibility, applicability, and transferability of evidence further plague practitioners.¹² Because of these flaws, policy-makers and front line decision-makers will often take up research based on its relevance and timeliness rather than its generalizability. Similarly, the credibility of the research is judged less by its rigor than how it fits with professional or practice wisdom and experience. The literature also points to the rather

unsurprising conclusion that “policy makers and practitioners are more likely to read and understand research, and to use research to think about their work in new ways, than to actually apply research directly to policy and practice decisions” (p. 49).¹⁵

2.3 Research Questions

The purpose of this project was to work with two BC Health Authorities (HAs): Vancouver Coastal Health (VCH) and Vancouver Island Health Authority (VIHA), to explore the implementation experience of the Healthy Living Core Program. The analysis presented by the project team is expected to support these health authorities in their review and performance improvement planning of this particular core program. Our primary research question was: What is the implementation experience of HAs with regards to the Healthy Living Core Program? In particular, what factors influence the implementation of healthy living initiatives by HAs? What is the context within which HAs deliver healthy living programs and services? How do health authorities define evidence and how is evidence (including evaluation indicators) used in these implementation decisions? Our funding notification arrived in June, 2008 and after securing ethical approval from the University of Victoria, VIHA and VCH five months later, we were able to schedule interviews, gather documents, and begin gathering information for the Environmental Scan in January, 2009. We held six research team meetings over the period of June 2008-July 2009.

3 Implications

Given that the profession of public health in much of North America and Europe is dealing with the issue of health behaviours and its consequences,¹⁶ it is not surprising that the findings from our relatively brief glimpse of the implementation experience within two BC health authorities mirror others’ experiences as described in the literature. In this regard, despite the specific focus on the three components of healthy living and the geographical boundaries of our study, we suggest that the project offers insights for other health authorities in BC, across Canada and other jurisdictions. We conclude that:

- a population health framework provides a key orientation to the implementation of healthy living;
- with the exception of tobacco reduction, partnerships between other governmental and non-governmental organizations characterize the delivery of these initiatives;
- the implementation of these rely equally on tacit and practice-based experience of professionals as well as traditional evidence;
- the use of evidence is interpreted more as a professional/disciplinary expectation rather than as a requisite of public health responsibilities;
- evidence is used directly by HA staff to inform policy and practice, particularly in the area of tobacco reduction. With physical activity and healthy eating initiatives, practitioners describe conceptually how research informs discussions, motivates new ideas or improves their understanding of issues.
- the search continues for reliable, comparable, meaningful and easy to gather indicators to capture both the process of implementation, but also its outcomes.

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4 Approach

A case study design was used for this study. The two participating health authorities – VIHA and VCH – represented the chief cases, with the unit of analysis at the organizational level. The BC Ministry of Health was also included as a secondary case, to shed light on the policy and strategic level of the implementation process. Because of the limitations associated with our selected data collection strategies, caution should be used when reading the results as they represent and reflect the perspectives and experiences of only those individuals who were invited and agreed to participate. Through members of our research team, we were able to connect with decision-makers in VIHA, VCH and the Ministry of Healthy Living and Sport involved with the Healthy Living Core Program. Many of these individuals comprised our interview sample; others joined our team meetings and provided guidance and updates on the implementation timeline and structure; and, others facilitated our attendance at meetings and/or provided documents for our review.

Over the course of the study, preliminary results and findings from the interviews and Environmental Scan have been shared through presentations to the BC Physical Activity Initiatives Group,ⁱ the VCH Childhood Diabetes Workshop,ⁱⁱ and the BC Provincial Obesity Task Force, in addition through electronic newsletter of the Core Public Health Functions Research Initiative.ⁱⁱⁱ The full report will be sent to all interview participants and contacts at VCH and VIHA, presented at a VCH Healthy Living/Chronic Disease Prevention meeting to help inform the Performance Improvement Plan, and uploaded onto UVicDSpace for public access: <https://dspace.library.uvic.ca>. In addition, manuscripts describing the study will be submitted to *Implementation Science, Evaluation & the Health Professions*, and the *Canadian Journal of Public Health*. Other dissemination activities include: Policy rounds at the Ministry of Healthy Living and Sport, and presentations at BC/Canadian Public Health Association conferences. The following five methods were used for data collection:

(i) Documentary review: to provide a context for implementation of healthy living programs in the province, to identify indicators already in use, and to help build an environmental scan of similar provincial healthy living initiatives, 18 documents were reviewed. A complete list is available in Appendix A.

(ii) Meeting Attendance: to observe and learn from 5 networking opportunities which brought together coordinators and/or practitioners involved in healthy living initiatives. Members of the research team attended the following meetings: 2 BC Physical Activity Initiatives Group; 1 Core Public Health Functions Research Initiative conference; 1 Vancouver Coastal Health Childhood Diabetes workshop; 1 Public Health Association of BC conference.

ⁱ This is a provincial group of government and not-for-profit agencies (N = 57) involved in the delivery of physical activity programs, events and policies who meet quarterly to share and discuss the delivery of PA initiatives.

ⁱⁱ A group of health care professionals (N = 45) responsible for diabetes care for children and youth throughout the care continuum within the Vancouver Coastal Health Authority region.

ⁱⁱⁱ A research team comprised of academics and public health professionals in BC and Ontario (N = 35) who study the implementation of public health programs, services, policies.

(iii) Environmental Scan: to catalogue healthy living initiatives (physical activity, healthy eating, tobacco reduction/cessation) unfolding in VIHA/VCH regions during 2004-2009. The scan provides important contextual information to understand HAs decisions concerning the implementation of healthy living program/services. Data for the scan were collected through monthly internet/website searches, document reviews (e.g., newsletters), media releases/announcements, and through interviews conducted with HA/Ministry representatives and meetings attended. While we 'chased' down hundreds of leads, our final scan presents only initiatives that we were able to confirm through an organizational contact or website. Neither does the scan include initiatives that were funded or delivered through corporate or private means. The scan is available at http://web.uvic.ca/~cphfri/research_projects/healthy_living_intervention_research_project.htm

(iv) Interviews: to capture the diversity of perspectives among health authority and Ministry stakeholders, maximum variation and intensity purposive sampling¹⁷ was used to identify potential participants for interviews. A total of 29 individuals from VIHA, VCH and the Ministry participated in semi-structured interviews. One participant was interviewed twice, and one declined to be interviewed due to workload. All of the interviewees were involved in the planning, implementation and/or evaluation of healthy living initiatives, either within a health authority or as part of the Ministry staff team. In total, interviews were done with 14 VCH staff, 7 VIHA staff and 8 Ministry staff. The health authority interviewees worked in a mix of urban and rural settings, and represented a mix of front-line and management positions (Table 1 in Appendix B). Please see Appendix C for the interview questions.

(v) Web-based Survey: to shed light on the structures of partnerships or collaborations among health-related organizations, to identify the key players involved in delivering healthy living initiatives and the gaps, overlaps, and opportunities for networking. Using the organizations identified in the Environmental Scan, as well as those gleaned from documents, interviews and meetings, 92 organizations were invited to participate in the survey. After 3 reminders, a total of 43 representatives from organizations delivering healthy living initiatives in the VIHA/VCH health regions took part in an on-line survey (47% compliance

rate). Drawing on previous experiences in the literature,¹⁸ respondents were asked to indicate: (a) the type of relationship they had with organizations, on a scored continuum (1 through 5): exchange information – advocacy – networking - share resources - work together on time limited projects; and, (b) the frequency of contact with these organizations (daily, weekly, monthly, quarterly, annually).

4.1 Data Analyses

Documents were reviewed by five members of the research team who followed the same review procedures, producing a high level overview/summary of the initiative(s) described in each document, including its health targets; targeted audiences; activities; partners; evaluation plans, indicators, population health measures etc.; and, a list of spin-off initiatives identified within each document – nationally, provincially or within the Vancouver Island/Vancouver Coastal region. Interviews were transcribed by the person conducting the interview. Once all interviews were completed, each research team member received between 4-5 transcripts to review and begin the open coding process. NVivo software was used as the primary data management and organizational tool for these sets of qualitative data. Using an editing analysis approach, open coding first identified patterns and themes to emerge across data sources. This was followed by inductive analytic strategies. To move the data beyond a classification of themes and provide a perspective for which the utility and implications of the study's findings were generated, we recontextualized or reframed the data in terms of existing knowledge and literature.

Data from the Environmental Scan were organized into various worksheets in Excel according to: type of initiative (physical activity, healthy eating, tobacco reduction or combination of these), health authority region, and the level of delivery, and each initiative categorized as one of six types. Responses from the on-line survey were downloaded into an excel spreadsheet reformatted/coded for input into SPSS (PASW 18) to generate descriptive statistics, and frequency measures.

5 Results

The following summarizes the six main themes emerging through the contextual analysis (document reviews, meeting observations, and Environmental Scan), interviews, and the web-based survey: '*big picture thinking*,' '*partnering within and beyond*,' '*implementation as assimilation*,' '*tacit practices and knowledge transition*,' '*instrumental and conceptual use of evidence*,' and '*the plight of indicators*.' These themes are presented below in a discussion of the findings from each data collection strategy.

5.1 Contextual Analysis – Findings from Document Reviews, Meetings & Environmental Scan

Through document reviews, observations at meetings, and assembling the Environmental Scan, we found that the healthy living landscape within BC, and VCH and VIHA in particular, to be one of the most active in recent history. BC's investment in the ActNow Platform stimulated, through approximately \$85 million in government and corporate funding and matched funding initiatives, resulted in a myriad of healthy living policies, programs, resources and infrastructure, much of which was identified in our Environmental Scan. Resources such as the Wellness Atlas,¹⁹ the creation of Seniors' Parks,^{iv} provincial roll-out of the Action Schools! BC initiative,^v and the forthcoming Physical Activity Line,^{vi} identified in the documents although excluded from our Scan, nevertheless contribute to this unprecedented level of activity. This 'whole government' approach to ensuring that British Columbians were the healthiest and most active population to host an Olympic games has resulted in a marked increase in the number organizations engaged in promoting healthy living. The overall strategy for guiding the implementation of these healthy living initiatives followed a population health/social determinants approach that recognized *big picture thinking*: multiple, ecological factors to influence health and well-being. As such, behaviour change was only part of

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^{iv} http://www.actnowbc.ca/?section_copy_id=4770§ion_id=441

^v Action Schools! BC was excluded from the Scan because of it has been adopted by 100% of BC school districts. A list of registered schools in VIHA and VCH is available at www.actionschoolsbc.ca

^{vi} <http://physicalactivityline.com/> This initiative was being piloted, but not fully launched during our scanning activities, and thus not included. It is now operational.

the focus, as increasing access to healthy environments through policies, providing skill-building opportunities, in addition to information and resources, were recognized as important components of an integrated approach. As well, low income, low literacy, Aboriginal or geographically isolated British Columbians were identified as vulnerable populations most 'at-risk' and a priority audience in the initiatives (framed as the 'equity lens' in the Model Core Program Papers). In the literature, this is known as a 'settings-based' approach²⁰ or an ecological perspective where "health is created and lived by people within the settings of their everyday life"²¹ (p. 2). Thus, many of the initiatives were directed toward schools, workplaces, homes and other community venues. In contrast to this approach adopted by VCH and VIHA, Hanusaik and colleagues¹ recently found that a more siloed approach characterized the delivery of chronic disease prevention across the country.

15 Collaborative cross-sectoral relationships and extensive *within and beyond partnerships* further categorized this approach, so that initiatives were designed to align with and/or build on existing HA or regional/provincial programs and networks, and focused on 'vertical and horizontal integration across risk factors' in an effort to create sustained 'community solutions.' A third theme permeating the documents emphasized evidence-based and professional expertise-informed decision-making (often termed 'best', 'better' or 'promising practices'), and monitoring/evaluation of indicators or outcomes. Documents emphasized collection of standardized, population-wide indicators framed within a broad context, and balanced with gathering process and outcome measures, including estimating reach of the initiatives.

Tables 2 & 3 (Appendix D) summarize the information in the Scan. Overall, 139 initiatives were identified, 55 in physical activity, 51 in healthy eating, 26 in tobacco, and 7 a combination of one or more of these components. The bulk (94 or 68%) were provincial-level efforts, followed by those initiated at the federal (20%) and regional/municipal (12%) levels. With the recent dwindling public purse and financial constraints placed on health authority budgets, much of the activity identified in the Scan decelerated in the final months of 2009.

5.2 Core Implementation Issues in Healthy Living – Interview & Survey Findings

In keeping with the tone of the reviewed documents, our interview data confirmed that regional health authority staff engage in *big picture thinking* by following a community development/population health approach in physical activity and healthy eating, developing and continually nurturing many *partnerships within their profession or health authority and beyond* with other sectors through the course of their work. Table 4 (Appendix E) identifies the key 'players' within this landscape as determined by relationship scores from the web-based survey for each of the healthy living components and overall. The organizations are listed in rank order according to the average relationship scores generated from respondents in the survey. While the primary lead organization in each category changes, overall a consistent picture emerges of a dozen provincial organizations (including the government and the two health authorities) *partnering* to share the responsibilities. Overall, the typical relationship among these organizations when considering all three healthy living components averaged at 2.75/5 and can be characterized as operating between networking and sharing resources. The most frequently contacted organizations overall were regional/municipal governments, BC government, BC Recreation and Parks Association, the health authorities, BC Healthy Communities, BC Cancer Agency, Heart and Stroke Foundation of BC/Yukon, Dietitians of Canada and the BC Lung Association (Table 5, Appendix F). Survey respondents indicated almost weekly contact with regional/municipal governments and BC Recreation and Parks Association for physical activity initiatives, and with the BC government with regard to tobacco initiatives. For healthy eating, survey respondents connected with the BC government on an almost monthly basis.

Of the 43% of survey respondents (n = 18) who opted to answer the question about where they received funding, 33.3% cited the BC Government followed by regional/municipal governments (28.6%), BC Healthy Living Alliance (23.8%), 2010 Legacies Now (19%), and BC Recreation and Parks Association (14.3). Notably, 11.3% of the respondents indicated receiving in-kind resources from both VIHA and VCH, and the BC Government; only BC Healthy Living Alliance ranked higher (14.3%).

Interviewees working in health authorities recognized these overlaps between their work and that of other organizations. At the service delivery level there has been much collaboration to leverage resources and avoid duplication (*"so we don't have to start from scratch to try to do something different. We can follow the movement of the whole province, really"*). However, interviewees also acknowledged that they are missing opportunities and that other groups 'parachuting' in can be disruptive: *"They show up and tell everybody that they're actually doing what you've been doing forever, which is very aggravating."*

Despite efforts *to partner within* each HA, at the meetings we observed and during the interviews, there was general discussion about the challenges with the lack of integration among the three component areas of tobacco, healthy eating and physical activity. Health professionals are trying hard to work across these three areas and to integrate work with different population groups. Yet, this is a difficult task with regard to the Core Functions Programs work in general, given the way the core programs are split up, and the way that HA and Ministry staff are organized. The implementation of healthy living programs also varies by geographic area: tobacco control programs are implemented separately from physical activity and healthy eating on North Shore. In contrast, all three components are integrated in Bella Coola through their Active Communities plan.

The implementation experience of traditional public health responsibilities, primarily tobacco in both HAs, but also healthy eating through the Food Security Core Program in VIHA, we interpreted to be *implementation as assimilation*. Implementation is seen as weaving or fitting into the existing programs and service delivery that public health has traditionally been doing for years. This corresponds with the literature⁴ where implementation is defined a process of translation or interaction.

Stuff is happening that wasn't created or caused by core functions. It's kind of running in parallel.

What we're really trying to do is fit in core functions within current practice because most of these things are already occurring ... I don't think healthy living has been implemented, per se, as a brand new thing.

Interviewees from the Ministry of Healthy Living and Sport saw themselves as facilitating or stewarding implementation through supporting HAs Performance Improvement Plans and sharing information among health authorities and other healthy living stakeholders, a way to monitor gaps and overlaps in programming. In interviews, Ministry staff stated their wish to see healthy living provincially coordinated, with health authorities being the 'core' or central player, perhaps not always with regard to service delivery, but as a connector or catalyst for what's happening in the health regions. At the moment there is no specific mandate in the Core Program that defines health authority roles. The Ministry allotted \$100,000 to each health authority to help implement the Core Functions Framework (all 21 programs).

In interviews, health authority staff described how they interpreted the Healthy Living components of their work broadly – *big picture thinking* - using a framework that acknowledges the importance of the social determinants of health, rather than using strictly an individual behaviour change focus. Some also reflected on the use of an 'equity lens' in their work:

And, it's come to a place now, at this moment where the lens is looking at that sense of belonging in your community and what does that mean. And, what it means to apply an equity lens, to have food security, to have safe places to walk and to run, because those build connections.

While front line staff are driven by the priorities and needs of their individual communities, one of the challenges to using such a broad, population health approach has been that health authority staff have found it difficult to define the scope of what to implement:

One of the problems with the Core program papers is that they are quite high level, and when it comes to operationalizing it, there are some challenges. [We] try to help as much as possible ...[but we do] struggle with the scope issue – is it just risk factors or pre-determinants of disease?

Front line health authority staff admitted to being unaware of board priorities and/or they stated that they don't perceive health promotion is viewed as a priority or fully understood by Healthy Authority Senior Executive Team and Board members: *"The top people – they don't even know what we are doing."* VCH and VIHA staff are not alone. The literature comments on the tension between a philosophical desire to adopt a systems approach with a public health paradigm that is driven to respond to crises,²² despite warnings that eliminating health disparities will not be accomplished without a strong agenda advocating a population health/social determinants approach.²³

5.2.1 Tobacco control

The long tradition of tobacco control in public health has meant that the implementation of the healthy living core program has essentially been business as usual for both the implementation of programs and policies, as well as the use of evidence to inform policy and practice. Because of this history, tobacco programs are often implemented separately from healthy eating and physical activity. This is the case both within the health authorities and at the Ministry level.

Tobacco was so well established going into the core program discussion, that core programs was a bit of a tail at the end of the dog...The Healthy Living paper and structure just kind of formalized in a different way what was already going on in tobacco...many of the items in the core programs the HAs have already been working on for some time...it's a new label on an existing box, kind of thing.

In VCH, tobacco control is implemented separately in part because the structure of the organization has separated staff working in tobacco and healthy eating / physical activity. The tobacco component is very concrete, grounded in established scientific evidence, with a clear strategic plan. Other components, especially physical activity, are less well defined and developed. *"There is a real Tobacco Strategy that's out there. It seems like it is very concrete. It's almost like we are a little behind that. There is no real Physical Activity Strategy for the health authority."*

5.2.2 Physical Activity

Physical activity is less well developed as a specific focus within VIHA while in VCH, staff have been able to do more with physical activity (at least in a formal sense), in part because they have two dedicated positions (Active Living Coordinators). VCH healthy living staff *partner within and beyond* to facilitate connection between public recreation centre staff with public health staff, and also work to help recreation centres evaluate their programs more comprehensively. In VIHA, there is more emphasis on building *partnerships beyond* the HA with recreation centres to implement programs and advocate for policy in the physical activity realm. Unlike VCH, there are no formal positions in VIHA dedicated to the promotion of physical activity for the general population. Among VIHA interviewees, there was mixed reaction to the lack of dedicated positions in physical activity. One interviewee suggested that physical activity has "*not traditionally been entrenched in public health,*" and that, for the most part, physical activity programming in the health care system has focused on rehabilitation. So it is difficult for public health to know how to deal with it, especially with the multitude of programs offered through others.

That's kind of an area that's lacking – the physical activity part – within our health authority. I don't think it would hurt to have someone wearing that specific hat of physical activity to keep it top of mind in the health authority. We try to within nutrition, because we recognize that the two are so linked, but it's not really our role to wear [the physical activity] hat. We're not funded to do that.

At the Ministry level, one interviewee suggested a provincial physical activity strategy:

Ideal world to me? A provincial strategy for physical activity. Clearly articulated, multi-sector role: What's the health authority role, the governments' roles, the private sector role?

5.2.3 Healthy Eating

Healthy Eating programs are also structured and conceptualized differently between the two health authorities: whereas healthy eating is closely aligned and *assimilated* with food security in both health authorities, VIHA has oriented its healthy eating work with food security almost exclusively, through the

work of a Regional Food Security Consultant. In VCH, community nutritionists may be assigned to the Adult Healthy Living programs, and while connecting with the Food Security Core Program, healthy eating work concentrates more on a particular population (i.e., *“adults who are at risk for chronic disease and have health disparities”*), although interviewees acknowledged that *“we have community nutritionists, but they are focused on clinical intervention. There is nobody in the system that addresses healthy eating with a population. There are no programs ... there is a huge gap ... just like with physical activity.”*

5.3 Definition & Cultures of Evidence: Interview Results

Health authority staff are clearly exploring a variety of types of ‘evidence,’ defining the term broadly to including academic research, evaluations of previous programs, and more informal data, including stories and anecdotes. However, the *primacy of tacit-based evidence* was palpable in the interviews. ‘Grassroots’, local, ‘lived experience’ evidence is highly significant to their work, combined with evidence from academia and clinical evidence - *“some sort of hybrid as to what the best practice says.”* Definitions of ‘evidence’ varied based on role of the interviewee: Front-line workers more often referred to community-level process information as key sources of evidence (vs. academic or research-oriented types of information). However, managers also acknowledged the challenge with using strictly quantitative, academic-oriented evidence in community-based work that left them, similar to others’ experiences, *“fill the gaps in evidence”*⁶ (p. 148), and create a blend of *“science and art”*²⁴ (p. 12).

When asked what constituted ‘evidence’ in their daily work, participants’ responses reflected the diversity in the definitions of the term: *“It’s a feel. That what a lot of our evidence would consist of.”* Others noted that evidence included *“Even, just hands-on experience. Just from being part of our community, and hearing community feedback.”* For everyone, the definition included both ‘hard’ and ‘soft’ evidence:

I don’t know if I have a specific definition for ‘evidence’, but I think there’s a broad range of different types of evidence that have different strengths and weaknesses ... evidence in terms of what is

universally seen as 'hard' evidence in terms of double-blind clinical trials, don't necessarily fit with what I do. And therefore I might be relying on what individuals think. Some of it may be anecdotal, which obviously isn't a super-strong source of evidence.

The definition and use of evidence also varied depending on the type of community in which health authority staff were working; context and capacity are significant factors influencing the implementation of evidence.²⁴ For example, in rural and remote areas, interviewees noted that evidence viewed as 'scientific' was not always accurate and reflective of the population's needs, their health behaviours, or their health status. Therefore, there was an emphasis on establishing community-friendly means to collect information and indicators, relying on local knowledge and indigenous acumen to shed light on what works in individual communities: *"It's also looking broadly at the literature in terms of, you know, not just individual change and individual decision-making, but that collective community capacity growing body of literature and how we might best go about that given that every community is different."* Moreover, health authority staff working with Aboriginal communities operated from a slightly different set of values and practice with regard to the definitions and use of evidence. The immediate feedback received from community members, including participation levels, was essential in guiding their next steps: *"I define evidence as community feedback."*

Ministry staff also viewed evidence broadly with different levels (i.e., professional standards, other jurisdictions' experiences, major research sources) seen as appropriate at different times. They also expressed some struggle to interpret that evidence: *"One of the biggest frustrations is that sometimes evidence isn't written for policy makers to use ... [we need] a lot of briefing material upfront that's in more everyday reading style [so that] it resonates for the government employee."*

Participants' perspectives countered the traditional primacy afforded randomized controlled trials as the gold standard for evidence, and joined the growing support in the literature against this 'one size fits all' argument for establishing effectiveness of health interventions.²³ Whitehead,²⁵ in particular, is a vocal advocate within the public health research community to acknowledge that a macro-perspective - *big*

picture thinking - already informs the evaluation activities of some, notably those who work in tobacco control and non-health care policies. Known as the 'weight of evidence,'⁶ participants' sources of information included non-experimental data, their *tacit* professional experiences and observations, community judgments, theory and the "cumulative wisdom derived from systematic analysis of these and an understanding of the situations and populations in which they would be applied"⁶ (p. 127). Often termed evidence-informed, evidence-influenced and evidence-inspired,¹⁵ such experiential knowing reflects a way to interpret data, stories and statistics. Most recently, Chen²⁶ refers to this as viable validity; a component he argues that must be added to evaluation models. So, in addition to the traditional evaluation question of 'does an intervention work,' we need to ask 'will it work' and 'is it worth it'? Recognizing that public programs are often designed "on the basis of informed guesswork and expert hunches, enriched by some evidence and driven by political and other imperatives"²⁷ (p. xi), such local reinvention or transition/transformation²⁸ of knowledge has been referred to as 'tinkering' that integrates the "explicit evidence from research with tacit or craft knowledge" combining locally collected data, and thus "creates new knowledge as part of this process"¹⁵ (p. 116). In fact, this fusion of evidence represents a "paradigm-shifting" approach thought vital to reducing health disparities.²⁸

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The culture of evidence – the ways in which evidence is defined, judged valid, and used – was more strongly defined by the particular professional group of health authority staff, than by the expectations or norms of the organization. The culture of evidence was also viewed to be affected by the dominance of the health care system over health promotion – both within the organization and society.

I can't really say what the expectations are from [my HA]. I think it's completely an expectation within our profession. I haven't necessarily received guidance from the organization that I work for.

As a demonstration of that culture, having the time to read and digest research is a barrier for health authority staff. Not surprisingly, this is well documented in the literature where heavy workloads, limited budgets and competing pressures means that formal research use has lower priority.¹⁵ *"I think the*

majority of time that I spend developing my knowledge around the evidence base is personal time... in health, especially, we often talk about evidence-based work, evidence-based practice, and to be able to do that, I think it requires having a firm grasp on the evidence base and current evidence."

5.3.1 Instrumental and Conceptual Use of Evidence

The use of research in HAs can be classified as both instrumental and conceptual. Tobacco reduction is an example of HAs instrumental use of research where evidence directly influences policy and practice.¹⁵

More often, however, with physical activity and healthy eating initiatives, practitioners reported that they found it difficult to identify concrete examples of any visible influence of research on their work, although they were able to describe conceptually how research informed discussions, motivated new ideas or improved their understanding of issues in their field. Closely associated with conceptual use is the process use of research: the experience of evaluating a project can provide practitioners with new ways of thinking and/or behaving that result from new learnings. The literature points to the priority of instrumental knowledge rather than the conceptual or process use of research.¹⁵ Our data suggest that the latter two are significant to HA staff experiences: that's how they prefer to operate and what seems most effective for them. The best practices were defined as what's happening at the local level, rather than what's cited in the literature.

In interviews, health authority staff stated that they rely heavily on informal networks to share new evidence/research and help decide what is compelling enough to move forward on. The literature supports this finding: personal contacts are cited as the most important source of information about research – through their colleagues, networks etc., so that research use is not just an individual but a collective/social activity resulting in the joint reconstruction of research evidence.⁶ The uptake of evidence has expanded in recent years, as the internet and other technologies have made research much more accessible. Health authority staff acknowledged that it was important for them to adapt new or especially persuasive evidence for the context of the particular communities in which they work:

And, it's kind of always a partnership with other community groups or organizations that we're working with and how that does implementation make sense for our own community. It's always a matter of adapting. It's never straightforward – something that we can take from somewhere else and plunk it down here. That's not the way that we work.

Documents from the Ministry and Provincial Health Officer, Health Canada and the Public Health Agency of Canada, and some other, national non-governmental organizations were described as credible and trustworthy. To facilitate use of evidence for day-to-day decision-making, health authority staff suggested that the formatting of that evidence needs to be distilled to be easily digested – “*bite size pieces,*” and offer practical examples and applications:

I would like access to more evidence. It can't be an evidence paper that's ten pages long. It has to be something you can scan and get the evidence bites out of it and then incorporate.

[We need] the most accurate information that is available, but also in bite size pieces. Not the 200 pages that we're often delivered and expected to read by tomorrow.

Participants' comments echoed recommendations in the literature to advance knowledge exchange.^{5,15,24} One important criterion for the credibility of research is its fit with professional or practice knowledge – does the research validate existing practice? Credibility is often viewed more important than the technical quality of the research. It is not surprising then that participants' first choice of evidence related to their discipline – bodies whom they trust, see as credible, and understand their realities.

5.3.2 The Plight of Indicators

Health authority staff struggle to use indicators and to evaluate beyond what is highly feasible (e.g., number of people who participate in a particular program). This *plight of indicators* is also reflected in the implementation process often overlooked in evaluation, which may be more important to the daily practice in public health than the longer-term outcomes.

I like outcome measures, but often we end up measuring success by the process.

I often think we use indicators because they are measured rather than because they actually tell us something or it's something that we really want to change.

The set of evidence with regard to this process was just as critical to health authority staff as that evidence that refers to the impact or outcome of a program: *"How do we even demonstrate that what we're doing is appropriate?"* In interviews, health authority staff emphasized the importance of showcasing local successes. Further, while population health indicators are used to set goals and allocate resources accordingly, health authority staff struggle to come up with appropriate indicators (especially outcome measures) to measure the strengths and challenges of the initiatives they are implementing.

It's a challenge for us because it's a balance of what can we collect and how does it identify with the work we are doing? We keep certain statistics ourselves; we do small evaluations with pre and post type questionnaires. But, for the bigger picture stuff, it's difficult and challenging.

We have gone through I don't know how many iterations of attempts to measure what it is we do and it's always been very painful. What indicators are there?

In rural and remote areas, the indicators that were available and viewed as 'scientific' were not always accurate nor reflective of the population's needs, their health behaviours, or their health status partly because, interviewees' commented, traditional data collection methods (e.g., phone surveys) don't work with disadvantaged populations or remote communities. Instead, health authority staff in these areas emphasized establishing community-friendly means to collect information and indicators, placing particular importance on local knowledge, *tacit practices and knowledge transition*. The impression was that their community development work in communities could not be captured through traditional measures, and therefore risked being disregarded as valid. The increased use of qualitative and more creative methods (e.g., storytelling, video, photography) in evaluation was noted and appreciated by health authority staff.

In interviews, some health authority staff expressed disappointment at a lack of support from within their organization to try to develop and use appropriate indicators to evaluate their work: *"I really do feel that there's been a lack of support within the health authorities to try to even assist, you know, with trying to develop appropriate indicators. So we do it sort of on a hit and miss basis."* The struggle to identify indicators was shared by Ministry staff who admit that there is no logic model for Healthy Living – just a 'general schematic': *"We recognize that there needs to be process and outcome indicators that are meaningful and collectable."* It should be noted that these VCH and VIHA experiences are not isolated. In a national survey of organizations' practices related to chronic disease prevention, involvement in evaluation was rated the lowest among practice skills.¹

6 Additional Resources

- RE-AIM framework to guide evaluation of public health interventions conceptualizes the impact of a population health policy or initiative as a function of five factors – reach, efficacy, adoption, implementation and maintenance. RE-AIM maximizes flexibility and relevance to ensure evaluation is "more understandable, responsive and pertinent to peoples' lives." www.re-aim.org
- The website Health Evidence offers access to a variety of resources "to facilitate the adoption and implementation of effective policies, programs, or interventions at the local and regional public health decision making levels." <http://www.health-evidence.ca/>
- National Institute for Health and Clinical Excellence (United Kingdom) provides national guidance on promoting good health and preventing and treating ill health that is in line with the best available evidence of effectiveness and cost effectiveness. <http://www.nice.org.uk/>
- The first issue of 2010 in the Journal of Public Health contains several articles about evaluation and public health: *Journal of Public Health*, 32(1). Doi:10.1093/pubmed/fdp122

- Ballew, P., et al. (2010). Dissemination of effective physical activity interventions: are we applying the evidence? *Health Education Research Advance Access*. Doi:10.1093/her/cyq003.
- Nutley, S., et al. (2007). *Using evidence. How research can inform public services*. UK: The Policy Press.
- Green, L.W., et al. (2009). Making evidence from research more relevant, useful and actionable in policy, program planning and practice. *American Journal of Preventive Medicine*, 37, S187-191.

7 Further Research

From our study, issues concerning evidence and its use appear paramount. Perhaps, as others²⁷ have suggested and our findings further allude to, more than evidence is needed to inform decisions around the delivery of healthy living initiatives within public health. Evidence alone may not be sufficient to obediently translate as a policy or programs. What else do health authority staff need to make sound judgements about what to implement and what to leave in the hands of community partners? We suggest the following as future research questions to address the existing gaps in knowledge: (1) What is the appropriate mix of evidence- and practiced-based decision-making to inform the implementation of healthy living initiatives? (2) How can this evidence best reach, inform, and serve public health staff in their planning, implementation and evaluation of healthy living initiatives? (3) Given the multiple demands on and economic vulnerability of the public health system, as well as its increased accountability for resources, and the network of players involved in the delivery of healthy living initiatives, what is the best role for health authorities to occupy to minimize duplication, fill-in gaps and maximize the impact of services? Studies to address these issues must include practice-based trials,⁷ natural experiments and case studies²⁴ of initiatives unfolding in real time, in real places led by public health personnel who collect feasible and relevant indicators that have meaning for their work. Because communities can often act faster than researchers, conducting process, impact and outcome evaluations of untested healthy living interventions can significantly influence the

practice of public health.¹ As well, longitudinal, prospective designs to track both comparable and unique indicators over time are essential to the surveillance task of public health, and will help to elucidate the dynamic nature of the implementation experience. Finally, evaluations framed from a macro-perspective are essential to advancing the field and decision-makers, researchers, and front-line staff need to lobby funding agencies to broaden their funding priorities and timelines.²⁵

8 References

1. Hanusaik, N., O'Loughlin, J.L., Kischuk, N., Paradis, G., & Cameron, R. (2010). Organizational capacity for chronic disease prevention: A survey of Canadian public health organizations. *European Journal of Public Health, 20*(2), 195-201.
2. Smith, R.D., & Petticrew, M. (2010). Public health evaluation in the twenty-first century: time to see the wood as well as the trees. *Journal of Public Health, 32*(1), 2-7.
3. Sussman, S., Valente, T., Rohrbach, L., Skara, S., & Pentz, M. (2006). Translation in the health professions. *Evaluation & the Health Professions, 29*(1), 7.
4. Green, L.W., Ottoson, J., Garcia, C., & Hiatt, R. (2006). Diffusion theory and knowledge dissemination, utilization, and integration in public health. *Annual Review of Public Health, 30*: 151-174.
5. Rummery, K. (2009). Healthy partnerships, healthy citizens? An international review of partnerships in health and social care and patient/user outcomes. *Social Science & Medicine, 69*: 1797-1804.
6. Pronk, N., & Goetzel, R. (2010). The practical use of evidence; practice and research connected. *American Journal of Preventive Medicine, 38*(2S): S229-S231.
7. Jansson, S.M., Benoit, C., Casey, L., Phillips, R., & Burns, D. (2010). In for the long haul: knowledge translation between academic and nonprofit organizations. *Qualitative Health Research, 20*: 131-143.

8. Green, L.W., & Glasgow, R. (2006). Evaluating the relevance, generalization, and applicability of research: issues in external validation and translation methodology. *Evaluation & the Health Professions*, 29(1): 126-153.
9. CIHR (2003). *The future of public health in Canada: Developing a Public Health System for the 21st century*. Ottawa: Author.
10. Population Health and Wellness, BC Ministry of Health Services. (2005). *A framework for core functions in public health: Resource document*. Victoria, BC: Author.
11. Glasgow, R., & Emmons, K. (2007). How can we increase translation of research into practice? Types of evidence needed. *Annual Review of Public Health*, 28, 413-433.
12. Armstrong, R., Waters, E., Crockett, B., & Kelehr, H. (2007). The nature of evidence resources and knowledge translation of health promotion practitioners. *Health Promotion International* 22(3), 254-260.
13. Green, L.W. (2007). Translation 2 research, the roadmap less traveled. *American Journal of Preventive Medicine*, 33(2), 137-138.
14. Dzewaltowski, D., Estabrooks, P., Klesges, L., Bull, S., & Glasgow, R. (2004). Behavior change intervention research in community settings: how generalizable are the results? *Health Promotion International*, 19(2), 235-245.
15. Nutley, S., Walter, I., & Davies, H.T.O. (2007). *Using evidence. How research can inform public services*. UK: The Policy Press.
16. Catford, J. (2007). Chronic disease: Preventing the world's next tidal wave – The challenge for Canada 2007? *Health Promotion International*; 22(1): 1-4.
17. Patton, M.Q. (1990). *Qualitative evaluation and research methods*. CA: Sage.
18. Harris, J., Luke, D., Burke, R., & Mueller, N. (2008). Seeing the forest and the trees: using network analysis to develop an organizational blueprint of state tobacco control systems. *Social Science & Medicine*, 67, 1669-1678.

19. The British Columbia Atlas of Wellness. (2007). Canadian Western Geographical Series, Volume 42.
20. Dooris, M., Poland, B., Kolbe, L., de Leeuw, E., McCall, D., & Wharf Higgins, J. (2007). Healthy settings: building evidence for the effectiveness of whole system health promotion – challenges and future directions. In D. McQueen & C. Jones (eds.), *Global perspectives on health promotion effectiveness* (pp 327-352). NY: Springer.
21. World Health Organization. (1988). *Health promotion glossary*. WHO: Geneva.
22. Tannahill, A. (2008). Beyond the evidence – to ethics: a decision-making framework for health promotion, public health and health improvement. *Health Promotion International*, 23(4): 380-390.
23. Koh, H., Oppenheimer, S., Massin-Short, S., Emmons, K., Geller, A., & Viswanath, K. (2010). Translating research evidence into practice to reduce health disparities: a social determinants approach. *American Journal of Public Health* 100(S1): S72-S80.
24. Ballew, P., Brownson, R., Haire-Joshu, D., Heath, G., & Kreuter, M. (2010). Dissemination of effective physical activity interventions: are we applying the evidence? *Health Education Research Advance* Access. Doi:10.1093/her/cyq003.
25. Whitehead, M. (2010). The right wood, but barking up the wrong tree. *Journal of Public Health*, 32(1), 16-17.
26. Chen, H.T. (2010). The bottom-up approach to integrative validity. *Evaluation and Program Planning*, 33(3), 205-214.
27. Coote, A., Allen, J., & Woodhead, D. (2004). *Finding out what works: Building knowledge about complex, community-based initiatives*. London: Kings Fund.
28. Dankwa-Mullan, I., Rhee, K., Stoff, D., Reineke Polhaus, J., Syu, F., Stinson, N., & Ruffin, J. (2010). Moving toward paradigm-shifting research in health disparities through translational, transformational, and transdisciplinary approaches. *American Journal of Public Health*, 100(S1), S19-S24.

9 Appendices

Appendix A

List of Documents Reviewed

1. Action Schools! BC - Phase 1 Evaluation Report and Recommendations, November 2004. Heather McKay, University of British Columbia.
2. BC Healthy Communities 2007-2010 Strategic Plan, March 2007.
3. BC Healthy Living Alliance, Capacity Building Strategy, September, 2007.
4. BC Healthy Living Alliance, Healthy Eating Strategy, May 2007.
5. BC Healthy Living Alliance, Physical Activity Strategy, March 2007.
6. BC Healthy Living Alliance, Tobacco Reduction Strategy, May 2007.
7. British Columbia Recreation and Parks Association (BCRPA). (2008). *A strategy to increase physical activity amongst British Columbians: The Active Communities Initiative: Three-year business plan for the BCRPA, April 2008- March 2011.*
8. Community Solutions for Promoting Physical Activity in British Columbia. Cross Government Research, Policy and Practice Branch, Office of the Chief Information Officer, Ministry of Labour and Citizens' Services, June 2008.
9. Food, Health and Well-Being in British Columbia. Office of the Provincial Health Officer, March 2005.
10. Healthy Living Core Program – VCH Gap Analysis, March, 2009.
11. Healthy Living Fund Interim Report, BC Projects, March, 2009.
12. Model Core Program Paper: Healthy Living. BC Health Authorities & BC Ministry of Health, April 2007.
13. Model Core Program Paper: Healthy Communities. BC Health Authorities & BC Ministry of Health, April 2007.
14. Model Core Program Paper: Food Security, BC Health Authorities & BC Ministry of Health, June 2006.
15. Performance Management and Evaluation Plan for ActNow BC. Ministry of Tourism, Sports and the Arts, July 2007.
16. Richmond Community Wellness Strategy. October, 2007.
17. The British Columbia Atlas of Wellness. Canadian Western Geographical Series, Volume 42, 2007.
18. Vancouver Coast Health Authority - Approach and Schedule to Performance Improvement Plans. March, 2008

Appendix B

Table 1. Summary of Completed Interviews

<i>Interviewee Level</i> →	<i>VIHA</i>		<i>VCH</i>		<i>Ministry</i>		<i>Total</i>
	Front Line	Mgt	Front Line	Mgt	Mgt	Front Line	
Healthy Living Area ↓							
Tobacco		1	2	1	1		5
Healthy Eating	4	1	3			1	9
Physical Activity			2			1	3
Healthy Living in General		1	1	5	5		12
Total	4	3	8	6	6	2	29

Appendix C

Interview Questions for Health Authority Participants

1. Please tell us about your role/involvement/experience with the Healthy Living Core Program within HA.
2. We are interested in knowing what influences your decisions around the implementation of the healthy living initiative (tobacco control, healthy eating, physical activity), either at an organizational or individual level of decision-making.
 - a. Resources
 - b. Evidence papers
 - c. Policies
 - d. Board/executive priorities
 - e. Internal expertise (e.g., colleagues or consultants with whom you advise)
 - f. Gaps, overlaps by other organizations (e.g., BCHLA, Ministry of Education etc.)
3. Can you tell us how you define 'evidence' and what that means for your work. Specifically, how do you use evidence to inform the planning, implementation or evaluation of the healthy living initiative?
 - a. What kinds of evidence do you use and where do you look for evidence?
 - b. How useful is it?
 - c. Adaptations, modifications you have made for your local context?
 - d. Have you thought about indicators of success for the healthy living initiatives?
4. What kinds of resources do you need to use evidence most effectively?
 - a. Preferred format, delivery, language
 - b. Funding to hire a consultant to do this work for you?
 - c. Time for you and your staff to be able to read and make sense of the information?
5. What is the culture in your health authority for using evidence to inform your work?
 - a. Values, rewards, included in budget or workload
6. In order for us to get a better understanding of how healthy living initiatives are implemented within your area ...
 - a. Is there anyone else you think we should interview?
 - b. Are there any documents that you suggest we review?
 - c. Are there any meetings that it would be helpful for us to attend and observe?
7. In addition to interviews and document reviews, we are conducting an environmental scan of healthy living initiatives that are in your health authority's jurisdiction in order to describe the context for healthy living core program implementation. Once completed, we are happy to share this with you.
 - a. What type of information in a scan database might be useful to you as you plan/implement/evaluate the healthy living core program?
 - b. Are you aware of any inventories or scans that currently inform your work? (e.g., such as contributed to the gap analysis in the Performance Improvement Plan?)
 - c. Are there any local healthy living initiatives that might be 'under the radar' that you know about that we should include in the scan?

Interview Questions for Ministry Participants

1. Please tell us about your role/involvement/experience with the Healthy Living Core Program within your Ministry.
2. We are interested in the relationship between the your Ministry and the Health Authorities in regards to the Core Programs:
 - a. Do you have established/ongoing relationships with the Health Authorities around the Core Programs in general?
 - b. The Healthy Living Core Program specifically?
 - c. What is the nature of the relationship e.g. working group, stakeholder committee, individual contacts?
 - d. What are the most common methods of communication? How often?
3. We are interested in knowing what influences your decisions around the implementation of the Healthy Living Core Program (tobacco control, healthy eating, physical activity) and what you would share with the Health Authorities.
 - a. Resources
 - b. Evidence papers
 - c. Policies
 - d. Ministry priorities
 - e. Internal expertise
 - f. Gaps, overlaps by other organizations (e.g., BCHLA, Ministry of Education etc.)
4. Can you tell us how you define 'evidence' and what that means for your work. Specifically, how do you use evidence to inform the planning, implementation or evaluation of the healthy living initiative?
 - a. What kinds of evidence do you use?
 - b. How useful is it?
 - c. Adaptations, modifications you have made for your local context?
 - d. Have you thought about indicators of success for the Healthy Living Core Program?
5. What kinds of resources do you need to use evidence most effectively?
 - a. Preferred format, delivery, language
 - b. Funding to hire a consultant to do this work for you?
 - c. Time for you and your staff to be able to read and make sense of the information?
6. In order for us to get a better understanding of the implementation process,
 - a. Is there anyone else you think we should interview?
 - b. Are there any documents that you suggest we review?
 - c. Are there any meetings that it would be helpful for us to attend and observe?
7. In addition to interviews and document reviews, we are conducting an environmental scan of healthy living initiatives that are in British Columbia in order to describe the context for healthy living core program implementation. Once completed, we are happy to share this with you.
 - a. What type of information in a scan database might be useful to you in relation to the healthy living core program?
 - b. Are you aware of any inventories or scans that currently inform your work?
 - i. Are there any local healthy living initiatives that might be 'under the radar' that you know about that we should include in the scan?

Appendix D

Tables 2 & 3

Table 2. Summary of Healthy Living Initiatives By Type

	<i>Physical Activity</i>	<i>Healthy Eating</i>	<i>Tobacco</i>	<i>Combination</i>	<i>Total</i>
Resource	24	37	19	4	84
Grant	16	8	1	3	28
Policy	3	2	2		7
Other	12	4	4		20
Total	55	51	26	7	139

Resources include websites, programs, workshops, best practice models; Grants include seed grants, funding for program participation; Other includes events, advertising campaigns, contests.

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Table 3. Summary of Healthy Living Initiatives by Government Level

	<i>Physical Activity</i>	<i>Healthy Eating</i>	<i>Tobacco</i>	<i>Combination</i>	<i>Total</i>
Federal	9	37	5	3	28
Provincial	36	8	20	4	94
Regional/Municipal	10	2	1		17
Total	55	4	26	7	139
		51			

Healthy Eating includes Food Security initiatives; Physical Activity includes Built Environment initiatives; Tobacco Reduction includes cessation, prevention and education.

Appendix E

Table 4. Key Players in Healthy Living Initiatives (Relationship Scores)

<i>Physical Activity</i>	<i>Healthy Eating</i>	<i>Tobacco</i>	<i>Combination</i>	<i>Overall</i>
<i>Rank (Relationship Score)</i>	<i>Rank (Relationship Score)</i>	<i>Rank (Relationship Score)</i>	<i>Rank (Relationship Score)</i>	<i>Rank (Relationship Score)</i>
1 (4.3) BC Recreation & Parks Association	1 (3.8) BC Government	1 (5.0) BC Lung Association	1 (3.25) BC Healthy Living Alliance	1 (3.33) BC Healthy Living Alliance
2 (4.0) Regional/municipal governments	2 (2.91) VCH/VIHA	2 (4.75) BC government	2 (3.18) BC Cancer Agency	2 (2.84) BC Cancer Agency
3 (3.4) BC government	3 (2.55) Canadian Cancer Society (BC/Yukon)	3 (3.75) VCH/ VIHA	3 (2.91) BC government	3 (2.75) BC government
4 (3.2) 2010 Legacies Now	3 (2.55) Heart & Stroke Foundation (BC/Yukon)	4 (3.33) Canadian Cancer Society	4 (2.85) Regional/municipal governments	4 (2.64) Regional/municipal governments

Scoring: 1 – exchange information; 2 – advocacy; 3 – networking; 4 - share resources; 5 - work together on time limited projects

Healthy Living Implementation Final Report

<i>Physical Activity</i> <i>Rank (Score)</i>	<i>Healthy Eating</i> <i>Rank (Score)</i>	<i>Tobacco</i> <i>Rank (Score)</i>	<i>Combination</i> <i>Rank (Score)</i>	<i>Overall</i> <i>Rank (Score)</i>
5 (2.44) SmartGrowth BC	5 (2.5) BC Recreation & Parks Association	5 (3.0) Heart & Stroke Foundation (BC/ Yukon)	5 (2.69) VCH/VIHA	5 (2.46) VCH/VIHA
6 (2.40) BC Healthy Communities	6 (2.45) Regional/municipal governments	6 (2.5) BC Healthy Living Alliance	6 (2.17) BC Recreation & Parks Association	6 (2.31) BC Recreation & Parks Association
7 (2.10) BC Cancer Agency	7 (2.36) BC Healthy Living Alliance	7 (1.75) BC Healthy Communities	7 (2.15) 2010 Legacies Now	7 (2.26) 2010 Legacies Now
8 (2.0) Heart & Stroke Foundation (BC/Yukon)	7(2.36) Dietitians of Canada	8 (1.25) BC Recreation & Parks Association	7 (2.15) Canadian Diabetes Association	8 (2.22) Canadian Diabetes Association

Scoring: 1 – exchange information; 2 – advocacy; 3 – networking; 4 - share resources; 5 - work together on time limited projects

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<i>Physical Activity</i> <i>Rank (Score)</i>	<i>Healthy Eating</i> <i>Rank (Score)</i>	<i>Tobacco</i> <i>Rank (Score)</i>	<i>Combination</i> <i>Rank (Score)</i>	<i>Overall</i> <i>Rank (Score)</i>
8 (2.0) ParticipACTION	9 (2.0) 2010 Legacies Now	8 (1.25) Public Health Association of BC	9 (2.10) Dietitians of Canada	9 (2.18) Dietitians of Canada
10 (1.70) BC Healthy Living Alliance	10 (1.90) BC Cancer Agency	10 (1.0) BC Cancer Agency; regional/municipal governments	10 (2.08) BC Healthy Communities; Heart & Stroke Foundation (BC/Yukon)	10 (2.10) Canadian Cancer Society

Scoring: 1 – exchange information; 2 – advocacy; 3 – networking; 4 - share resources; 5 - work together on time limited projects

Appendix F

Table 5. Key Players in Healthy Living Initiatives (Frequency of Contact Scores)

<i>Physical Activity</i>	<i>Healthy Eating</i>	<i>Tobacco</i>	<i>Combination</i>	<i>Overall</i>
<i>Rank (Frequency Score)</i>	<i>Rank (Frequency Score)</i>	<i>Rank (Frequency Score)</i>	<i>Rank (Frequency Score)</i>	<i>Rank (Frequency Score)</i>
1 (3.60) Regional/municipal governments	1 (2.67) BC government	1 (3.75) BC government	1 (3.07) Regional/municipal governments	1 (2.75) Regional/municipal governments
2 (3.55) BC Recreation & Parks Association	2 (2.58) Dietitians of Canada; regional/municipal governments	2 (3.25) BC Lung Association	2 (2.64) BC Cancer Agency	2 (2.6) BC government
3 (2.18) BC government	3 (2.00) BC Healthy Communities	3 (3.1) VCH/VIHA	3 (2.46) BC government	3 (2.25) BC Recreation & Parks Association
4 (1.7) 2010 Legacies Now	4 (1.92) BC Recreation & Parks Association	4 (3.0) Canadian Cancer Society (BC/Yukon)	4 (2.18) VCH/VIHA	4 (1.9)VCH/VIHA
5 (1.55) BC Healthy Communities	5 (1.75) Heart & Stroke Foundation (BC/Yukon)	5 (2.0) BC Healthy Communities	5 (2.08) Canadian Cancer Society (BC/Yukon)	5 (1.88) BC Healthy Communities

Scoring: 5 – daily contact; 4 – weekly contact; 3 – monthly contact; 2 – quarterly contact; 1- annual contact.

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<i>Physical Activity</i>	<i>Healthy Eating</i>	<i>Tobacco</i>	<i>Combination</i>	<i>Overall</i>
<i>Rank (Frequency Score)</i>	<i>Rank (Frequency Score)</i>	<i>Rank (Frequency Score)</i>	<i>Rank (Frequency Score)</i>	<i>Rank (Frequency Score)</i>
6 (1.32) VCH/ VIHA	6 (1.67) BC Cancer Agency; VCH/VIHA	6 (1.6) BC Cancer Agency; BC Recreation & Parks Association; Heart & Stroke Foundation (BC/Yukon)	6 (2.0) BC Healthy Communities	6 (1.86) BC Cancer Agency
7 (1.2) Heart & Stroke Foundation (BC/Yukon)	7 (1.42) Canadian Cancer Society (BC/Yukon)	7 (0.8) Canadian Diabetes Association; Dietitians of Canada; Public Health Services Association; Public Health Association of Canada	7 (1.93) Public Health Services Association	7 (1.63) Heart & Stroke Foundation (BC/Yukon)
8 (1.18) BC Cancer Agency	8 (1.18) Canadian Diabetes Association	8 (0.6) Regional/municipal governments	8 (1.86) Heart & Stroke Foundation (BC/Yukon)	8 (1.63) Canadian Cancer Society (BC/Yukon)

Scoring: 5 – daily contact; 4 – weekly contact; 3 – monthly contact; 2 – quarterly contact; 1- annual contact.

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<i>Physical Activity</i>	<i>Healthy Eating</i>	<i>Tobacco</i>	<i>Combination</i>	<i>Overall</i>
<i>Rank (Frequency Score)</i>	<i>Rank (Frequency Score)</i>	<i>Rank (Frequency Score)</i>	<i>Rank (Frequency Score)</i>	<i>Rank (Frequency Score)</i>
9 (1.0) BC Lung Association ParticiPaction; Union of BC Municipalities	9 (1.8) BC Agriculture Council	9 (0.4) Union of BC Municipalities	9 (1.67) BC Recreation & Parks Association	9 (1.58) Dietitians of Canada
10 (0.8) Canadian Cancer Society; Canadian Diabetes Association	10 (1.0) 2010 Legacies Now; Public Health Services Association	10 (0.2) 2010 Legacies Now	10 (1.57) Public Health Association of Canada	10 (1.17) BC Lung Association

Scoring: 5 – daily contact; 4 – weekly contact; 3 – monthly contact; 2 – quarterly contact; 1- annual contact.