
The first edition of the *BC Atlas of Wellness* was published in 2007 in response to the government of British Columbia’s health promotion initiative called ActNow BC, which was established in 2005. The initiative was introduced to encourage British Columbians to make healthy lifestyle choices to improve their quality of life, reduce the incidence of preventable chronic disease, and reduce the burden on the health care system. ActNow BC was an integrated, whole-of-government approach that involved contributions from a variety of partners, including municipalities, non-governmental organizations, schools, communities, and the private sector, to develop and deliver programs and services that would assist individuals to quit or never start smoking, to be more physically active, to eat healthier foods, to achieve and maintain a healthy weight, and to make healthy choices in pregnancy.

The rationale for the Atlas was to visually communicate data and information about key and novel wellness indicators for BC. A secondary purpose was to highlight patterns that emerged from these data in an interesting and informative way, and where possible to show changes over time at the provincial level while also providing comparisons at the national level. The objective was not only to help people recognize and understand why certain geographical patterns might occur, but also to encourage questions provincially, regionally, and locally as to the reasons for the patterns, why wellness varied over space, and what could or should be done about it. These remain the key components of this second edition.

Rarely does a day go by without maps being featured in the media to help locate an issue, to understand geographical relationships, or to demonstrate a geographical variation. The common expression that “a picture is worth (or can save) a thousand words” certainly also holds true for a map. But a map also can generate a hundred questions. Why do geographical patterns exist and what is causing them? What can be learned from these patterns and are these differences a good thing, and if not, what can be done to improve matters? Research has shown that the public wants maps packaged in the form of atlases to allow them to browse their community and region, to understand regional variation, and to allow for relative comparison—i.e., How am I doing in my region or community compared to other regions or communities? (Keller, 1995; Mitton et al., 2009). Further, decision makers and policy makers have also indicated the need to have data provided to them in map form to help inform decisions (Mitton et al., 2008).

This chapter provides a recent history of the ActNow BC initiative and its key goals. The background is important as a context for understanding how the *BC Atlas of Wellness* is put together in terms of its framework and in terms of the indicators that are mapped. This is followed by a brief discussion of the usefulness of maps and atlases for the purpose of displaying wellness and health initiatives. A review of the changes incorporated into the second edition of the *BC Atlas of Wellness* is also provided, followed by a description of the chapters of the Atlas.

A Brief History of ActNow BC

There were a couple of motivations that led to the establishment of ActNow BC. First was the July 2003 announcement that British Columbia would host the 2010 Winter Olympic and Paralympic Games, and that the legacy was to be a healthier population (Geneau et al., 2009). Second, in 2004, the Select Standing Committee on Health was asked, among other things, to investigate successful health promotion campaigns in other jurisdictions with a view to assessing their usefulness for BC. The Committee was also asked to look at how to promote “healthy lifestyles,” and to consider savings that
might result from the improved fitness of the population (BC Select Standing Committee on Health, 2004). The Committee noted that 40% of the commonest chronic diseases resulted from one or more of the following: smoking, poor diet, physical inactivity, obesity, and irresponsible alcohol consumption. The Committee felt that the whole population could respond to the excitement of hosting the Games and become healthier as a result.

The government’s strategic plan published in 2005 indicated that BC was not only to lead the way in North America in healthy living and physical fitness, but was to be the healthiest jurisdiction to host the Olympic and Paralympic Games (Government of British Columbia, 2006). Five key goals were established, around which the BC Atlas of Wellness is primarily, but not exclusively, organized. The key 2010 targets for ActNow BC were:

1. Increase by 20% the proportion of the BC population (aged 12+ years) that is physically active or moderately active during leisure time from the 2003 prevalence of 58.1% to 69.7%.

2. Increase by 20% the proportion of the BC population (aged 12+ years) that eats the daily recommended level of fruits and vegetables from the 2003 prevalence of 40.1% to 48.1%.

3. Reduce by 10% the proportion of the BC population (aged 15+ years) that uses tobacco, from the 2003 prevalence of 16% to 14.4%.

4. Reduce by 20% the proportion of the BC population (aged 18+ years) that is currently classified as overweight or obese from the 2003 prevalence of 42.3% to 33.8%.

5. Increase by 50% the number of women counselled regarding alcohol use during pregnancy, and have focused strategies for the prevention of fetal alcohol spectrum disorder (ActNow BC, 2010).

ActNow BC was initially coordinated through the Ministry of Health. In August 2006, the stewardship role was transferred to the Ministry of Tourism, Sport and the Arts (MTSA), and the BC government appointed a Minister of State for ActNow BC under MTSA and established an ActNow BC Branch to provide the whole-of-government and cross-sector stewardship, coordination, strategic communications/marketing guidance, and evaluation support. In June 2008, the BC government announced the creation of the Ministry of Healthy Living and Sport, and ActNow BC remained part of the Ministry of Healthy Living and Sport, and a Minister of State for the Olympics and ActNow BC was appointed. In late July of 2010, the then Minister of Healthy Living and Sport indicated a strategic change in ActNow BC activities. While the four pillars of physical activity, healthy eating, living tobacco-free and consuming alcohol responsibly remained as important components of government’s chronic disease prevention strategy, ActNow BC became largely focused on physical activity and community engagement. Further programming was to become tailored to reach under served populations as well as the general public. The Ministry of Healthy Living and Sport was disbanded in October 2010 and ActNow BC transferred to the Ministry of Health.

In implementing the ActNow BC initiative, government recognized that success in achieving these goals needed long-term changes in beliefs, values, and behaviours, and while government could be the leader, it could not do it alone. There was a need for influential community partners, and four key partners were singled out: BC Healthy Living Alliance (BCHLA), 2010 Legacies Now, BC Recreation and Parks Association (BCRPA), and the Union of BC Municipalities (UBCM).

The BCHLA was formed in 2003, before the introduction of ActNow BC, and worked to promote chronic disease prevention and alliance building. It consisted of a variety of key organizations with interests in chronic disease prevention. Voting members of the BCHLA include the BC Lung Association, BC Pediatric Society, BCRPA, Canadian Cancer Society, BC and Yukon Division, Canadian Diabetes Association, Dietitians of Canada, BC Region, Heart and Stroke Foundation of BC and Yukon, Public Health Association of BC, UBCM. Other key organizations involved included the Health Authorities, the Centre on Aging at the University of Victoria, Directorate of Agencies for School Health BC and the Arthritis Society of BC/Yukon to name a few. Collectively, BCHLA at one time represented nearly 40 organizations, 40,000 volunteers, 4,300 health and recreation professionals, and close to 200 local governments (Geneau et al., 2009).

BCHLA produced several important documents in early 2005 that have been significant in terms of giving publicity to ActNow BC goals (BCHLA, 2005a), as well as providing an analysis of the risk factors associated with chronic disease and an effectiveness analysis of interventions (BCHLA, 2005b). This Alliance received more than $25 million in one-time funding in 2006 to help government achieve its ActNow BC goals and developed 15 initiatives in healthy eating, tobacco smoking cessation/prevention, physical activity, and community capacity building (http://www.bchealthyliving.ca). These are described and analysed later in the Atlas.
2010 Legacies Now was first created in 2000 to assist with the Olympic bid, and to help ensure that the benefits of the 2010 Olympics were shared throughout the province. It became an independent society in 2002, with a mandate to ensure “a strong and lasting sport system for the province that increased participation and supported safe, healthy, and vibrant communities.” Its mandate was expanded in early 2004 to include the arts, volunteerism, and literacy, and to develop a network of community committees throughout the province to support these areas. These were all important initiatives that helped to develop assets for wellness, and in 2006, Legacies Now was provided with nearly $5 million to support ActNow BC initiatives (http://www.2010legaciesnow.com). In February 2011, 2010 Legacies Now became LIFT Philanthropy Partners with a mandate to “accelerate the growth and impact of selected not-for-profit organizations to create positive and lasting social change through sport and healthy living, and literacy and lifelong learning. The overall aim is to enhance social well-being and economic prosperity in communities across Canada” (http://www.liftpartners.ca).

The BCRPA, like 2010 Legacies Now, is a non-profit society and, as its name suggests, it is “dedicated to building and sustaining active healthy lifestyles and communities in BC.” It also has a role in helping to increase sports and recreation activity in the province (http://www.bcrpa.bc.ca).

The fourth key organization was the UBCM, which has represented the interests of municipalities in the province for more than a century. The UBCM was provided $5 million in government funding in 2005 to establish a Community Health Promotion Fund that provided grants, on a competitive basis, to local government to support health promotion focusing on healthy living and chronic disease prevention in support of ActNow BC goals.

The Ministry of Health was aware that all ministries within government had the ability to influence the achievement of ActNow BC goals. To help focus on the ActNow BC initiative, a cross-ministry group of assistant deputy ministers from each ministry in government was created, and $15 million over 3 years was made available for projects brought forward that supported the ActNow BC goals. Ministries, or their funded agencies, needed to match these funds in order to qualify for funding. In 2006, ministries were expected to include within their respective service plans a set of initiatives that demonstrated how they would contribute to ActNow BC. Just as the Atlas was going to press in May 2011, ActNow BC as a name was dropped by the BC government following the release of the new Premier’s Healthy Families BC initiative. This initiative was called “the most comprehensive health-promotion program anywhere in Canada” and “will support British Columbians in managing their own health, reducing chronic disease and ensuring that pregnancy and support programs target the province's most vulnerable families. Additionally, the strategy will continue to focus on healthy eating initiatives, including a public awareness campaign around sodium and sweetened beverage reduction” (Office of the Premier, 2011). The ActNow BC branch has since changed its name to Health Promotion Supports and Engagement, and the new strategy will be supported by a committee of Assistant Deputy Ministers on Chronic Disease Prevention.

We believe that this shift to a broader approach to health promotion and chronic disease prevention especially for the province’s vulnerable families gives more weight to the mapping approach that we have taken as it helps to identify those regions which are doing well, and those regions which are vulnerable to poorer health and wellness outcomes.

Mapping Wellness and Health

Maps have been used as a form of communication in health and wellness studies for over 150 years. The origin of modern spatial epidemiology and health geography was the 1854 mapping of cholera victims in London, when descriptive statistics and maps were used by John Snow to identify how cholera was transmitted, making recommendations for prevention of future outbreaks (Keller & Hystad, 2007). Today, health and wellness researchers use geographic information systems (GIS) and web-based mapping to expand beyond disease mapping to examine a number of scientific hypotheses, such as disease etiology, equitable access to health services, or the social determinants of health. Contemporary GIS is recognized as a powerful information technology to facilitate convergence of disease-specific information and its analysis in relation to population settlements, surrounding social and health services, and the natural environment (WHO, 2007).

Increasingly, health-related maps are valued by decision makers and policy makers. The visual depiction of data in maps has a particular appeal also for non-experts (e.g., board or senior-management decision makers). They are often viewed as a relatively quick and easy method to get information to groups and individuals that are pressed for time and unable or unwilling to read lengthy material because of time commitments. In particular, as noted earlier, maps are valuable in presenting comparisons because data are on one page and represent a useful way to make a point (Mitton et al., 2009).
Our review of health mapping and health-related atlases in the first edition of the Atlas noted that the vast majority focused on mapping negative (e.g., mortality and morbidity) rather than positive factors, “deficits” rather than “assets,” and “illness” rather than “wellness.” This was not meant as criticism, as focusing on problem areas and issues helps to get attention so that improvements can be achieved. What we provided in the BC Atlas of Wellness was a unique focus on the positive rather than the negative. This second edition of the Atlas uses over 140 pages of maps which present a large variety of indicators that provide a wide ranging picture of wellness in BC. We take the optimist’s half-full approach rather than the pessimist's half-empty approach and map wellness, or assets that can help determine, maintain, and improve wellness at the population level within the province. Instead of mapping obesity, we map healthy weights; instead of mapping smoking rates, we map smoke-free rates; instead of mapping physical inactivity, we map physical activity, and many more such indicators.

In health mapping, the tradition has been to compare communities and regions using maps that communicate degrees of something wrong. This atlas instead facilitates comparison by focusing on what is right, and hopefully what can be learned by others from this comparison. Examining the “best” area with a specific wellness indicator may help others learn what characteristics are at work in that area and can be used or adopted elsewhere.

The conditions we have selected, with one or two exceptions, show assets for wellness, just as obesity or smoking are risk factors for illness, poor development, and premature mortality. Focusing on wellness indicators and those areas that achieve high values on particular wellness assets can help provide some understanding of what is achievable, and those regions that feel they need to make improvements can learn from the “best.” The best values can become benchmarks for others to achieve, as these values have already been attained by one or more regions or communities in the province. And the ones who are doing the best can strive to do even better, thus raising the wellness bar or benchmark. One area can learn from another area in terms of what works, and adopt some of the strategies used by the communities that demonstrate high levels of “wellness.” Communities can also evaluate which of the indicators we provide in the Atlas are important ones to them, and decide whether to focus on improving them over time.

In the first edition of the Atlas, we expressed some concern that our focus on wellness could lead to the conclusion that all was “well” in the province, thus potentially undermining the need to focus attention on problem issues. This was clearly not our intent. A quick glance at many of the maps and tables will show that there are major “gradients” or differences in wellness between various areas in the province, and between different groups within the province. There are certainly areas that need improvement, and can be improved. Studying the areas or regions that appear to be the “best” on a particular wellness indicator may assist others to try to emulate their results by finding out what they are doing right to achieve these results. These areas will become clear when using the Atlas.

Our concerns have been largely unfounded, and we have been gratified by the local, national, and international response to our approach of mapping wellness. Within the province, the release of the Atlas was met with a lot of positive media interest, while at the national level the Atlas was described as an innovative approach to knowledge development and transfer by the Public Health Agency of Canada (2009a). Internationally, it has been recognized as setting the benchmark for Atlases of this nature (Exeter, 2009), and publicized by the Measuring the Progress of Societies organization (Giovannini & Hall, 2009). Further it has become clearer that others are looking to the positive approach rather than focusing in on problems. For example, the salutogenic model, which looks at health and wellness generating factors, is being used increasingly by health promotion researchers. Rather than disease prevention, the focus has moved to the assets that promote health and wellness (see Chapter 2).

It is also interesting to note that, since we started work on wellness mapping, several others have been doing similar work, and mapping has become much more interactive, based on improvements to GIS software. A couple of examples are provided here. Statistics Canada allows individuals to map nearly 90 health-related variables by health regions across the country. While actual values for health regions are not provided, information is given that shows whether values are significantly higher or lower than the Canadian average (Statistics Canada, 2008). Indicators are based on a variety of sources, and cover the period 1996 to 2006. Further, in 2007, Health Canada introduced the interactive Food and Nutrition Atlas of Canada, based on results from CCHS 2.2 (Nutrition) 2004 data. Information was only available at the provincial level for approximately 40 indicators, but some were wellness oriented, although only significant differences with the Canada-wide survey were provided (Health Canada, 2007).

Within Canada, a project that has been recommended by the Standing Senate Committee on Social Affairs, Science and Technology of the Canadian parliament is
Newfoundland and Labrador’s system of Community Accounts, which “allows users to access information on key economic and social indicators, organized by geography and data topic, providing users with information on the status and progress of their communities and their regions from an economic and social perspective” (Government of Newfoundland and Labrador, 2009).

A good example, elsewhere, of a project that focuses on mapping wellness and well-being at the community level is the CIV Community Indicators Victoria from Australia (Institute of Community Engagement and Policy Alternatives, 2006). Data and reports are presented on the well-being of the population by providing an integrated set of community well-being indicators. These indicators include a broad range of measures designed to identify and communicate economic, social, environmental, democratic, and cultural trends and outcomes. Approximately 60 wellness and well-being indicators can be mapped interactively.

At the global level, the Sustainable Society Foundation (2010) has developed an interactive mapping project that allows comparisons among nations based on a series of indicators. Overall “well-being indices” based on human, environmental, and economic well-being have been developed. More recently, the Organisation for Economic Cooperation and Development has introduced a Well-being index as part of its new Better Life Initiative.

Advancements and Changes

Since the original Atlas was completed in 2007, work continued to experiment with data and formatting based on preliminary responses to the Atlas. As part of this approach, we have developed several supplements to support the original Atlas. All of the supplements used data from the Canadian Community Health Surveys (CCHS). The first supplement focused on seniors using 2005 CCHS data, while the second provided Canada-wide maps that allowed comparisons of BC with all other provinces and territories with data from 2007. Subsequent supplements used 2007/8 CCHS data and provided information about BC wellness, while the fourth supplement had a focus on women's wellness (McKee et al., 2008; 2009a,b; Virtue et al., 2010). These supplements helped us improve the format for this edition of the BC Atlas of Wellness.

Between 2008 and 2010, we also entered into a partnership with BC Stats which allowed us to develop some new interactive products related to our wellness project. Data have been made available so that variables from the original Atlas, as well as this one, can be compared two at a time and graphed to see the type of relationships that might be evident. Further, more detailed, data are also made available through this arrangement (BC Stats, 2010a).

Format Changes

For those indicators that are derived from CCHS data, comparisons between the 2005 and 2007/8 samples are provided at the provincial level on the tables accompanying the maps. This allows the reader to see whether or not there has been a significant change between the two samples. Further, a graph has been added that gives a comparison with the Canada-wide average for a given indicator for key age cohorts as well as by gender.

It should be noted that the 2005 CCHS averages may be slightly different than those recorded in the original Atlas. This relates to the fact that Statistics Canada now reports the CCHS data differently. The denominator previously was based on the total sample size, while now it only includes those who answered the question. Consequently, the denominator is smaller than the total sample size, often resulting in a slightly higher value for 2005 than previously reported. In examining this issue, we are satisfied that the relative values and geographic patterns previously reported for Health Service Delivery Areas (HSDA) have not changed in any significant manner, and the comparisons between 2005 and 2007/8 use consistent denominators to ensure correct comparisons.

Further, sport membership data that had previously been reported at the Economic Development region geography is now reported at the HSDA level.

The number of chapters has been increased. Previously, all the wellness indicators were included in one chapter, which comprised most of the Atlas. We have changed this so that each domain (e.g., smoke-free issues, healthy weights) are now single chapters for ease of use. We have also added a new chapter, Free of Chronic Conditions. Free of chronic conditions had previously been included with Wellness Outcomes.

A new administrative boundary for mapping certain indicators has been introduced. This is based on the province’s Regional District model, and provides more detailed geographic coverage of certain new indicators.

Indicator Changes

There has been an expansion of the number of indicators mapped. While the first edition of the Atlas had approximately 120 different indicators and over 270 maps,
this edition has approximately 160 indicators contained in over 400 maps. While many of the indicators reported in the first edition have been updated in this new edition, some have been dropped for a variety of reasons. First, several have shown no change from the original Atlas, particularly those related to the physical environment. Second, some were removed because there were no new data for them. These included several of the community assets indicators (e.g., community centres, playing fields) and some CCHS indicators (e.g., health utilities index). Third, some of the ActNow BC related program data (e.g., Active Communities) have not been renewed because much of the population had access to this initiative and so little change would have occurred. Fourth, some indicators were removed because legislative changes were implemented, which meant there would be total coverage of the province of a certain wellness characteristic (e.g., municipal smoking restriction bylaws, smoking restrictions in schools, nutrition policies in schools). Overall, approximately 40 indicators were dropped.

New indicators have replaced some of the ones removed. For example, six individual indicators that helped to make up the CCHS Health Utilities Index have been added, while more indicators related to younger children (particularly those in grades 3/4 in schools) have also been included. Additional indicators related to a variety of wellness assets have been included, such as those related to housing, improving health, employment composition, arts and culture, income equity, volunteerism, nutrition, food supply and food security, new ActNow BC-related programs, and leisure time physical activities, to mention a few. In total, over 80 new indicators have been added.

**Organization of the Atlas**

Along with this introductory chapter, the Atlas consists of a total of 13 chapters. Chapter 2 provides a summary description of recent wellness and well-being frameworks and key wellness indicators, while Chapter 3 describes the key databases used for constructing our wellness maps. In addition, a guide is provided to help the user read the maps and tables that follow throughout the rest of the Atlas. Chapter 4 provides maps and tables on some key demographic variables that describe the make-up of the BC population in order to provide a context for the maps that follow.

Chapter 5 is the largest chapter in the Atlas, and provides information describing various components of wellness assets. These include families and income, housing characteristics, social connections, aspects of improving health, education, culture and arts, volunteerism, and safety.

The next five chapters cover key components of the original ActNow BC initiative. Chapter 6 looks at issues related to tobacco-free conditions. Chapter 7 provides indicators related to nutrition and food security, and includes food growing environments, farming, alcohol consumption, healthy eating, and food safety. Chapter 8 includes a variety of factors related to physical activity, while Chapter 9 provides maps and tables on issues of healthy weights. Chapter 10 illustrates items concerning healthy pregnancy and birth.

The next two chapters cover issues that reflect being free of chronic conditions (Chapter 11) and overall wellness outcomes (Chapter 12). The concluding discussion is contained in Chapter 13, and summarizes a variety of key patterns that emerge from the maps and tables presented in the Atlas.