



Child and Youth Health and Well-Being Indicators Project: Appendix B—Y [\ • @] Å { { æ ^ Å ^ [! ó å / Å å æ] Selection Criteria



Office of the
Provincial Health Officer



Canadian Institute
for Health Information
Institut canadien
d'information sur la santé



**Child Health and Well-Being Indicators Project:
Indicator Selection Criteria**

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Compiled with the assistance of:

Wayne Mitic Ed.D.
Adjunct Associate Professor

Bonnie Leadbeater Ph.D.
Professor

Department of Psychology
University of Victoria

I. Introduction and Background

The Office of the Provincial Health Officer (PHO), in partnership with the Canadian Institute for Health Information (CIHI), intends to identify a suite of indicators that will guide a future PHO report on the health and well-being of children in British Columbia. The initiative is supported by an advisory committee that consists of senior government policy makers and noted child health academics. The first phase of this project involved reviewing the literature on what creates health and well-being in children and what criteria should be used in selecting indicators. In August 2009 a background discussion paper, Appendix 5, was produced to:

- a) identify the major, modifiable factors and conditions that are known to enhance health and well-being in young people, and
- b) recommend specific criteria for establishing indicators that will identify the modifiable health and well-being factors and conditions among children in British Columbia.

The paper compiled an extensive review of the literature and distilled the commonly recognized elements of child health and well-being into a framework, along with criteria for selecting indicators, so that child health and well-being indicators could be identified systematically and in a transparent manner. Although consistent agreement exists in the literature on what creates child health and well-being, inconsistency occurs in the language used and the way health and well-being is framed. Thus the paper notes: *Many versions of this framework are possible and the choice of dimensions and sub dimensions necessarily depends on the goals for selecting and monitoring indicators.*

The next step in the process was therefore to solicit expert and stakeholder feedback to validate and refine the framework and indicator selection criteria to match the evidence in the literature with the above purpose.

In early September 2009 Dr. Ben Arie, an international expert on child health indicators, was invited to Victoria, British Columbia to consult with members of the indicators planning team and comment on the discussion paper. His feedback was integral to the completion of the background document, which also formed the basis for a workshop held from November 25-26, 2009 in Victoria. Workshop participants, who comprised selected provincial, national and international experts in child health and well-being indicator development as well as policy makers, practitioners, and representatives from the academic community, were asked to provide feedback on the health and well-being framework and indicator selection criteria content of the document.

The purpose of this paper is to briefly summarize the feedback received on the framework and indicator selection criteria from the framework validation workshop, the project's advisory committee, international experts and feedback from young people on what they view as important indicators of health and well-being and then present a revised health and well-being framework and revised indicator selection criteria. The revised framework and selection criteria will be used to focus the project as it moves into phase 2 - to begin selecting indicators and measures of the

components identified in the health and well-being framework. The ultimate goal of the initiative will be to identify a limited number of indicators that are both significant to the health and well-being of children and also malleable to policy, program or service interventions.

An extensive discussion of the research and theory behind the framework and selection criteria that were presented at the framework validation workshop are contained within the background discussion paper (see Appendix 5).

II. Framework Validation

On November 25-26, 2009, fifty seven experts in indicator development, child development and policy development were convened to review, comment and share their expertise on the health and well-being framework presented in the background paper. The major purpose of the meeting was to seek their advice in validating the proposed framework and selection criteria.

In addition to the feedback received through the workshop, the project's advisory committee also provided constructive feedback from a public policy development and indicator development. In general, feedback on the developing indicators, the framework and the criteria was very supportive. The constructive suggestions offered in the following areas:

- Feedback on the dimensions and ecologies presented in the framework primarily focused on ensuring the dimensions separated attributes of “being” from interventions as well as defining the ecologies in terms of what would make the most sense for children in British Columbia (see Section 4);
- The major feedback on the indicator selection criteria revolved around differentiating between the actual criteria for choosing indicators (see Section 5) from the over-arching principals for understanding child health and well-being. (see Section 3).
- The importance of expressing indicators in ways that can be understood by key stakeholders including the general public was consistently stressed. As well, the need for a process of consulting with children and youth was reaffirmed.
- Feedback was consistent on the importance of identifying a transparent and robust suite of indicators in a timely manner as opposed to trying to develop a definitive set of indicators for all time.
- Feedback from 152 young people from around British Columbia on health and well-being indicators was obtained through a consultation conducted by the McCreary Youth Council. Participants identified a number of indicators they believe are important in understanding the health and well-being of young people which can be situated within the framework. The top ten areas identified were: rates of substance use; supportive adults in your life; high school

graduation rates; suicide rates; physical activity rates; smoking rates; rates of youth in care; school safety; teenage birth rates; and rates of involvement in positive leisure and recreational pursuits.

III. **Guiding Principles in the Development of the Framework and Indicator Selection Criteria**

The following guiding principles offer a philosophical framework for understanding children's health and well-being. These principles were utilized in conceptualizing the foundations of the current paper - specifically the development of the integrated framework for predicting child well-being, as well as the selection of criteria for determining indicators for child well-being. (Note: many of the following principles were originally items that appeared in the selection criteria. References to support the following principles appear in Appendix A).

Principles form a set of statements that reflect basic beliefs about an issue and those aspects and approaches that are valued.

- **Comprehensive:** Child development and wellness is a dynamic process that is influenced by a multitude of processes and factors - both at the individual and context levels. Children interact with their environment and thus play an active role in creating their well-being by balancing the different factors, developing and making use of resources, and responding to challenges and successes. The context in which children develop has a dramatic influence on their well-being. Therefore to approach the topic of child health and well-being in a comprehensive fashion requires recognition of the following:
 - Individual child health and well-being consists of multiple domains including physical, social, mental, intellectual and emotional dimensions.
 - Children make up those persons between the ages of 0 to 18 years. Age-appropriate indicators are needed throughout the continuum from birth through adolescence and covering the transition into adulthood.
 - The programs and services that children access form a continuum that range from health promotion to disease prevention through to those that focus on brief intervention, treatment and rehabilitation.
 - Numerous systems affect child health and well-being including legal, educational, health, justice, housing and many others. These systems are dynamic and interdependent, influencing one another and changing over time. In interacting with the different systems and subsystems, children and their families encounter both barriers and facilitators.

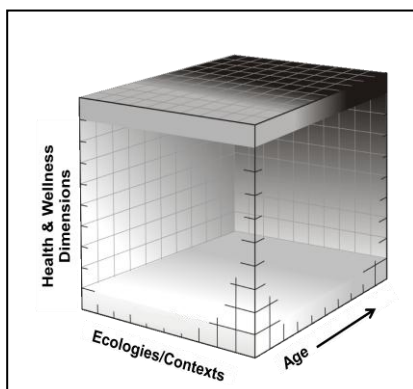
It is valuable to track some of the conditions that are known to be associated with child well-being, such as poverty, housing, neighbourhood characteristics, and family structure. These are not, strictly speaking, measures of child wellbeing, but none-the-less are essential for child well-

being. They serve as markers of family well-being, and constitute an important component of an indicators system.

- **Evidence Informed:** Being evidence informed implies that a process of integrating experience, judgment and expertise with the best available research has occurred.
- **Positive and negative dimensions of children's lives:** The set of child health and well-being indicators should provide measures of children's health and well-being as well as measures of impediments or risks to their health and well-being.
- **Takes account of well-being and well-becoming:** This principle recognises childhood as an important era in its own right but also as a crucial period of development from infancy through to adulthood.
- **Forward-looking:** When developing a set of indicators, consideration should be given to anticipating the future and providing baseline data for subsequent trends. What areas should be looked at now to plan for the future so that similar data will be available when they are needed? One example is mental health.

IV. A Framework for Predicting Child Health and Well-Being

The draft framework identified six key attributes that form the foundations of child health and well-being – referred to as the “dimensions”. Improving outcomes in these dimensions will increase the overall health and well-being of children in British Columbia. The second component of the draft framework identified the environments where children's health unfolds – the “ecologies”.



To provide a better visual perspective of the framework the cube to the left depicts its 3-D nature showing that in addition to the dimensions of health and well-being unfolding across a number of ecologies those dimensions will also unfold differently across the age span to support the health and well-being of all children and youth. The dimensions and ecologies do not form exclusive categories. Rather, they are dynamically intertwined and may change in their importance at different points across childhood.

There is considerable consistency in the priority areas that have been selected internationally to monitor child health and well-being. Thus it is not surprising that the feedback was in general agreement on the importance of the six broad dimensions of child health and well-being originally outlined in the background discussion paper.

Dimensions in background paper

1. child safety
2. positive relationships
3. effective education
4. economic and material well-being
5. mental health
6. physical health

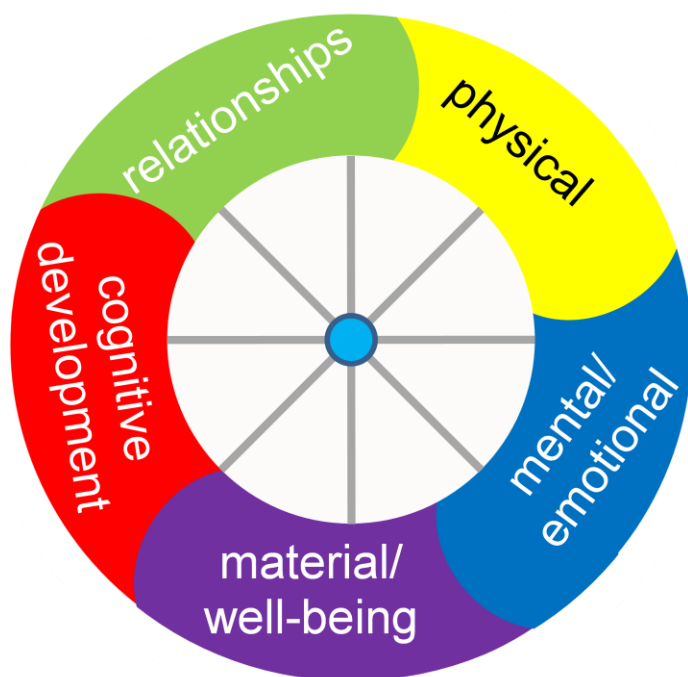
Revised Dimensions based on feedback

1. social relationships
2. cognitive development
3. economic and material well-being
4. mental/emotional health
5. physical health

While recognizing the importance of each of these dimensions, feedback emphasized not mixing dimensions of “being” with “interventions” and noted interventions would fit better within the framework’s matrix. Kristen Moore also identified this issue in her keynote address at the workshop. She referred to this as differentiating between “well-being” (outcomes experienced by children) and “contexts” (influences on well-being e.g.; poverty, healthcare, education). As a result, the revised framework removes safety and effective education as dimensions and places them within the matrix. While acknowledging that safety is a context rather than a dimension of being, the feedback also emphasized the importance of safety in ensuring the health and well-being of children and the need to specifically address safety within the suite of indicators. The revised framework replaces *effective education* with the dimension of *cognitive development*. (a description of the various dimensions and ecologies follows table 1).

We can visualize the critical dimensions of health and well-being that together determine to a large measure how a child’s life will unfold, as a tire on a bicycle wheel (figure 1). A child who has the physical, mental/emotional, cognitive, social relationships and material well-being aspects of his or her life well supported and balanced has a greater likelihood of navigating the road of life. Although the relative importance of each dimension will change based on the child’s age, environment and personal disposition, a dynamic balance among the dimensions will provide the necessary balance (or pressure) within the tire to move more smoothly through life and resist damage from obstacles on the road than a poorly inflated tire that is out of balance and has not been maintained.

Figure 1: Dimensions of Health & Well-being



The primary feedback with respect to the *ecologies* component framework revolved around the need to ensure that the ecologies are described in a way that makes sense for children in British Columbia.

Ecologies listed in background paper

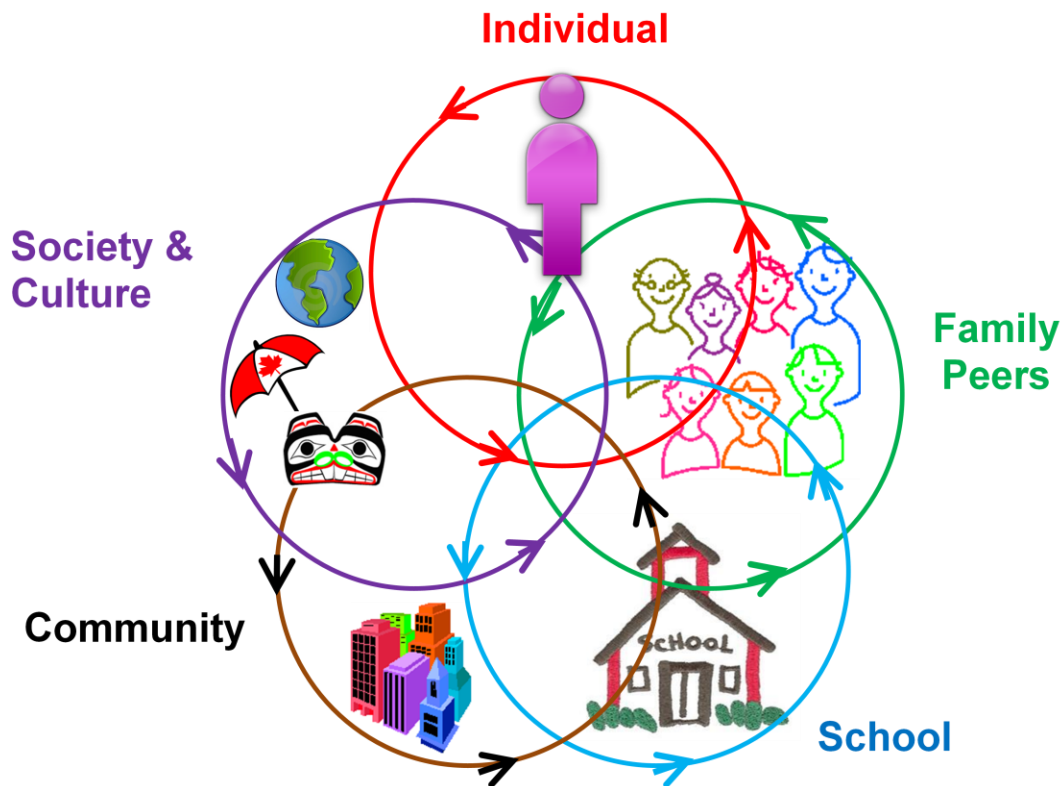
1. the individual
2. family & peers
3. school
4. community
5. culture & technology
6. health systems

Revised Ecologies based on feedback

1. the individual
2. family & peers
3. school
4. community
5. society & culture

Workshop participants suggested that culture & technology did not fit as a combined ecology and that health systems was too narrow of a focus on larger societal institutions that impact upon the health of BC children. Further feedback identified culture as an important foundation that permeated society rather than as a separate ecology. The framework's intent was to locate influences on child health and well-being beyond the community, such as culture, technology and social institutions into a broader ecology. This is represented in the revised framework through the *society and culture* ecology (See Table 1). Ecologies can be visualized as in figure 2, simultaneously overlapping while both influencing and being influenced by each other.

Figure 2: Ecologies



To summarize, sample indicators are used to elaborate and populate the dimension by ecology levels in Table 1, on the following pages. These examples are presented as if there were only two axes (dimensions and ecologies); however, they include key indicators that apply across the age spectrum).

Table 1. Integrated Framework for Predicting Child Health and Well-being across Ecologies and over Time in British Columbia with illustrative examples

DIMENSIONS	CHILD CENTERED ECOLOGIES				
	Individual	Family & Peers	Schools	Community	Society & Culture
Social Relationships	Capacity for positive attachments, emotional engagement Protection from domestic violence	Age appropriate parent supervision and monitoring Time with family (eating, vacationing, etc.) Consistently close and warm family relations Open communications with family Caring friendships	Caring teacher and inclusive peer relationships Belonging Connected to school Look forward to going to school	Opportunities for belonging, participating and volunteering and for civic engagement and youth-friendly work places. Drug and violence-free neighbourhood Neighbourhood cohesion	Integrated systems of services for children and families Opportunities for ethnic and cultural events Spiritual connections
Cognitive Development	School readiness Self regulation Critical thinking Problem solving Literacy	Parent literacy and life long learning opportunities Valuing education Family literacy (reads to children) Family and Peer valuing for education Parent school involvement	Engaging Curriculum Respectful of different cultures and learning strategies Learning opportunities linked to community and practical actions Literacy (general, health, media)	Opportunities for cross cultural activities Opportunities for mastery (arts, sport, hobbies) Access to Libraries	Integrated health and educational services for children (e.g. school-based immunization and health clinics) Child-orientated TV programming Limited exposure to media violence Safe internet use

DIMENSIONS	CHILD CENTERED ECOLOGIES				
	Individual	Family & Peers	Schools	Community	Society & Culture
Economic and Material well-being	Adequate wages for working youth. Opportunities for work Teenagers neither employed or in school	Limited family financial strains Safe play spaces and activities Families living below the Low Income Cut-Off	Access to resources (books, sports, recreation) Access to field trips	Limits on work hours for children Supervision and safety of working children Participation in sports, arts and recreation programs	Affordable and accessible medications and services Access to technology, multimedia Limit advertising to children.
Physical Health	Balance of nutrition and physical activity Safe habits Protection from injury Mortality rates	Monitoring child health and safety Support for families of children with chronic diseases Breastfeeding	Opportunities for health education/literacy Safe playgrounds School immunizations	Opportunities for healthy activity and living Enforcement for booster seat, seatbelts, and bike helmet use Access to clean air and water	Access to health care Chronic care services Access to medical information and care Protection from advertising of products that create health risks (smoking, alcohol, energy drinks) Regulation of water, air and environment
Mental/ Emotional Health	Optimism Intelligence Positive self-worth Perceived security Self-regulation Freedom from anxiety and depression Conflict resolution skills	Support and resources for parenting Support for children of parents with mental illnesses. Nurturing Parenting style	Increasing mental health literacy – coping with stress and loss Protection from bullying	Positive connections to significant non-parent adults (coaches, employers etc.) Access to mental health support programs, therapy and interventions	Dissemination of illness prevention programs Reduction of stigma surrounding child and parent mental illnesses

Infancy Preschool Childhood Adolescence Emerging Adults

Dimensions of child health and wellness

Part of the feedback process, including that received at the workshop, focused on providing greater local definition to the health and well-being dimensions and ecologies contained within the framework to address the specific needs and context of BC's children.

This involved the articulation of key concepts relevant to each of these dimensions. Key concepts, rather than generating mutually exclusive categories, often apply across dimensions and ecologies to create dynamic, inter-penetrating, and sometimes overlapping sub-domains of interest. While this can create difficulty in positioning the indicator where it “accurately” belongs, it also demonstrates how influences in one dimension can enhance or reduce influences in others. For example, issues related to healthy relationships and interpersonal respect and tolerance appear in many areas of the child health and well-being framework. Another key concept that is imbedded within each of the dimensions is safety. Following is a brief description of each dimension as described in the literature and suggested by the workshop participants.

- **Social relationships** with parent, peers, teachers, coaches etc. are a key indicator of child health and well-being. Such relationships are close, trusted, warm, caring, accepting, affirming, and reciprocal. Opportunities for belonging and inclusion in affirming family, peer, school, and cultural networks and for engaging in meaningful community actions with others are also central to this dimension. Spiritual connections through religious or personal experiences may also be highly important for child health.
- **Cognitive development** refers to how children perceive, think, and gain understanding of their world. Important aspects of cognitive development include the acquisition of age-appropriate reading/writing/numeracy skills as well as decision-making, critical thinking, problem solving and self-regulatory learning. Another key facet of this dimension is the ability to communicate needs/wants in a socially appropriate manner. From a child's perspective, learning that engages, interests, excites, inspires and also prepares the learner for healthy living and meaningful work may be most important aspect of an effective education. Equity in the accessibility of learning opportunities from preschool to college—for both formal schooling and extra-curricular activities—like art, music, sports—is also crucial.
- **Economic and material well-being** has always included access to nutritious food, adequate housing and warm clothing. However, the indicators of BC children's health and well-being goes beyond these basic markers of economic subsistence to also include their access to medicines and health care, the availability of computer technology to enhance learning, and the availability of team sports and extra-curricular and recreational activities to encourage and

promote healthy friendships. Access to green space, ancestral territories, cultural activities and libraries are also considered central to healthy life styles and child well-being.

- **Mental/Emotional health** is indicated by the presence of personal characteristics such as optimism, positive self-worth, emotional well-being and stability, and perceived safety and security. Children's mental/emotional health also includes self-regulating abilities such as coping with challenges and stress, goal directedness, and an orientation towards the future. It also encompasses a capacity for connectedness with other people and with one's culture and community. In addition, freedom from anxiety and depression, early diagnosis and treatment of serious mental illnesses and behavioural problems, and access to mental health treatments are essential to children's mental/emotional health.
- **Physical health** includes, but goes beyond, the absence of disease. Key beliefs about the markers of child physical health and well-being include healthy starts (breast feeding, immunizations, prenatal care, and no alcohol in pregnancy), healthy weight, good eating and sleeping habits, accessible preventive dental care, and screening for developmental, vision, and hearing problems. A sense of vitality, opportunities for recreational activities, physical fun and challenges, and access to traditional food sources are also essential. Sub dimensions of health also include injury prevention, and safe environments including access to clean air and water.

Ecologies of child health and well-being.

Although children are active agents who can and do shape and respond to the ecological conditions and contexts that they experience, there is little doubt that these conditions and contexts also have a strong influence on child health and well-being outcomes. The *dimensions* of child health and well-being focus attention on "what" this is, whereas the *ecologies* can provide information on "how" these dimensions can be supported (or challenged). Following is a description of each ecology:

- **Individual** factors contributing to child health and well-being stem from individual differences related to genetic, neurological makeup and health and developmental history, including personal traits such as optimism, curiosity, and the capacity for self-regulation.
- **Family and peer ecologies** including the quality of family relationships, emotional climate, and parenting practices are recognized as being universally key to children's health and well-being. Support for these relationships throughout development and in every dimension of health and well-being is paramount. Elements prioritized by workshop delegates included openness of communication and the availability of time and opportunities for families to eat, learn, vacation, and laugh together. Also identified was the need to address bullying and the development of strategies to enhance peer-related inclusion and tolerance.

- **Schools.** School, daycare and early education settings have a strong impact on the lives of children given the significant amounts of time spent there. In addition to curricula, effective education needs to meet the social and learning needs of children. Participants acknowledged the importance of the social and emotional dimensions of learning such as the social-emotional capacities to learn in relationships with others, connections to teachers and school, feelings of belonging, freedom from bullying, cultural sensitivity and inclusion of aboriginal and immigrant content. Schools are communities where children spend a significant portion of their lives.
- **Community.** The broader communities in which children live also greatly influence their well-being. In addition to the importance of safety and environmental quality, communities also provide BC children with opportunities for growth, development, connection and engagement through participation in formal and informal programs and activities including volunteering. The contributions of youth to their communities are further enhanced by youth-friendly public transportation and employers.
- **Society and Culture.** Provincial, national and international institutions influence children's lives in terms of education, welfare, justice, employment, housing and the environment through policies, programs, legislation, laws and treaties. An important aspect of culture is that it forms the relational community where children develop their identity and shapes how children view the world including their place of origin, ethnicity, form of government, economy and technology as well as spiritual beliefs and practices.

v. **Criteria for indicator selection**

Following is a proposed list of criteria for developing a set of child health and well-being indicators for British Columbia. The list is based on common themes prominent in the literature authored by leaders in the field and received general endorsement by the delegates who attended the workshop. (Note: a more detailed description of these items, with references appears in Appendix A).

- **Indicators must be significant to the well-being of children:** Indicators should measure the things that make the most difference towards improving the well-being of the child population. More precisely, significant to the well-being of children refers to the combination of the magnitude of the issue being measured (i.e. its prevalence) and the impact it has on the health of children (i.e. its severity) as well as population attributable risk and population attributable benefit.
- **Indicators must be relevant to policy:** Indicators should be amenable to effective action through policy, programs and services.

- **Indicators must be easily understood by multiple stakeholders:** Indicators should be clear and easily understood by decision-makers, the media, advocacy groups and the general public.
- **Indicators must be use rigorous methods:** The data should consist of objective statistical measures gathered through sound research techniques.
- **Indicators must be capable of producing estimates for key subgroups:** Indicators should allow for comparison on the basis of common demographic variables such as age, sex, socio-economic background, location or cultural background.
- **Indicators must be consistent in interpretation and comparability:** Indicators should have the same meaning in varied population sub-groups and be comparable across jurisdictions to facilitate valid comparisons.

Talk to Us

CIHI Ottawa

495 Richmond Road, Suite 600
Ottawa, Ontario K2A 4H6
Phone: 613-241-7860

CIHI Toronto

4110 Yonge Street, Suite 300
Toronto, Ontario M2P 2B7
Phone: 416-481-2002

CIHI Victoria

880 Douglas Street, Suite 600
Victoria, British Columbia V8W 2B7
Phone: 250-220-4100

CIHI Montréal

1010 Sherbrooke Street West, Suite 300
Montréal, Quebec H3A 2R7
Phone: 514-842-2226

CIHI St. John's

140 Water Street, Suite 701
St. John's, Newfoundland and Labrador A1C 6H6
Phone: 709-576-7006