Interior Health
Every person matters

Health for Everyone, by Everyone

A Population Health Perspective on Interior Health's Key Strategies

Medical Health Officer Report on the Health of the Population 2019

Message from the Medical Health Officer

Every year, a Medical Health Officer at Interior Health (IH) writes a report on the health and wellness of people living, learning and working in British Columbia's Southern Interior. **These reports celebrate our progress and shine a light on important population health issues that can be addressed through the organized efforts of the health-care system and its community partners.**

For 2019, I have used IH's key strategic priorities as a framework for a broader dialogue about what health and wellness means in the broadest sense, and what collaborative action can be taken at a systems level to promote health, prevent disease and improve health equity.

At every stage of life, our health is influenced by complex interactions between social and economic conditions, physical environment, access to health services, and individual biology and behaviour. It is the combined influence of these factors that affects our health and wellness. In this report, we hope to bring a new perspective to IH's key strategies relating to Primary & Community Care, Mental Health & Substance Use, Seniors Care, Aboriginal Health, Surgical Services and Workplace Health & Safety. We describe the health of the population in relation to the key strategies, how health promotion and prevention can contribute to the key strategies, and how key strategies work can be enhanced to impact health at a population level.

This report, and its recommendations, are for all partners within IH and across the Interior region who can contribute their knowledge, skills and resources to this collective effort. As you read this report, I encourage you to think broadly and creatively about the impact you can have on the health and wellness of clients, families, communities and society as a whole.

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Contents

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Executive Summary

Health Promotion, Prevention and Equity Support Personal and Community Health and Wellness

A strong, capable, and innovative health-care system is about much more than just health care. It's about recognizing that the road of health and wellness begins long before it intersects with clinical care. Along this road, **there are many influences on our health and wellness**, including income and social status, employment and working conditions, education and literacy, housing and other physical environments, access to health services, and other social and personal factors.

The road will be easier or harder to travel, depending on how we—as individuals, health-care providers and a society—choose to navigate these health determinants, and how we meet each person on this road.

The population health approach captured in this report aims to improve and protect the health of entire populations, and reduce unfair differences in health between groups, by looking at and acting upon the determinants of health. Likewise, by focusing on the whole person, not just the patient, and by recognizing the key roles of health promotion, prevention and equity, we can substantially improve our impact.

By engaging in **health promotion**, we are informed by the following concepts:

- Health is "a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity"[1].
- If the conditions exist to support healthy behaviour, every person can take control over and improve their health.

Prevention is based on the following actions:

- "Eradicating, eliminating or minimizing the impact of disease and disability, or if none of these is feasible, retarding the progress of disease and disability"[2].
- Preventing specific health problems that make a significant contribution to the burden of illness and injury, using specific interventions.

Health equity means the following:

- Social, economic and environmental conditions do not unfairly limit any individual's health and wellness.
- All people (individuals, groups and communities) are able to reach their full health potential.

Health is about more than just individual behaviour or the health-care system. No one exists alone, no community truly thrives without each of its members thriving, and the health of one is connected to the health of all. This is why we all benefit from a society that closes the gap in health equity, and why our health and wellness is rooted in collaboration and shared opportunity. Based on this understanding, **this report makes the following recommendations to all partners within IH and across the Interior region who can contribute to population health and wellness**:

1. To enhance the role of primary and community care in improving population health and health equity
2. To promote positive mental wellness through evidence-based, community-focused actions
3. To help seniors stay their healthiest in their community for as long as possible
4. To support shared decision making between Aboriginal peoples and IH in the planning and delivery of culturally relevant services for Aboriginal populations
5. To prevent and slow the progression of chronic disease and injury that leads to surgery
6. To enhance health promotion and prevention within a comprehensive workplace health & safety program
7. To develop a collaborative plan that enhances and integrates health promotion, prevention and health equity across IH
8. To create a population health and wellness dashboard for IH to track improvements in health status, health determinants and health equity

Acknowledgments

We recognize and acknowledge the traditional, ancestral and unceded territories of the Dãkelh Dené, St'at'imc, Syilx, Tsilhqot'in, Ktunaxa, Secwepemc and Nlaka'pamux Nations, where we live, learn and work together.

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Introduction

Over recent years, IH has realigned its resources and organizational structure to focus on the health needs of local communities, reduce the growth in demand for hospital care, and shift the balance of health care from hospital and long-term care to community programs and services. To support these ambitions, IH is focused on six key strategies:

Primary & Community Care
Improved, patient-centred access to team-based primary care for everyday health issues or concerns

Mental Health & Substance Use
Increased early intervention and timely access to the right supports and services

Seniors Care
Coordinated access to team-based, specialized community services and programs for those with complex medical conditions and/or frailty

Aboriginal Health
Partnerships and shared decisions to support improved health and wellness

Surgical Services
Improved access to surgical care with a focus on patient experience and outcomes

Workplace Health & Safety
A healthier, safer IH with a strong safety culture embedded into everyday practice

While this report acknowledges IH's commitment to cultural safety and humility, the health status of Aboriginal peoples in the Interior region will be the focus of a future report developed jointly with Aboriginal partners.

Health for Everyone, by Everyone: A Population Health Approach

In broad terms, a clinical approach to health aims to improve the health of individual patients through the delivery of health-care services. In contrast, a population health approach aims to improve and protect the health of entire populations, and reduce unfair differences in health between groups, by looking at and acting upon the wide range of factors that influence our health and wellness (the determinants of health)[3]. The population health approach can be described through a number of distinct features (Figure 1).

Figure 1. Features of the Population Health Approach

1. Focusing on the health of population groups

2. Basing our decisions on best available evidence

3. Using multiple tools to influence complex issues

4. Finding ways to engage and involve the public in health

5. Embedding cultural safety and humility in health care

6. Addressing the underlying determinants of health

7. Shifting investments upstream

8. Collaborating with others across sectors and levels

9. Holding ourselves accountable for outcomes

10. Advancing health equity to support equal outcomes

Sources: Public Health Agency of Canada (1-8) and Interior Health (9-10)

Within this broad population health approach, this report focuses on **health promotion, prevention** and **health equity**. These are related but distinct terms that distinguish what we're trying to achieve (the health and wellness of the population, and health equity) from how we're going to achieve it (health promotion and preventive health interventions).

Health Promotion

Consistent with the positive concept of health as "a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity"[1], health promotion "covers a wide range of social and environmental interventions that are designed to benefit and protect individual people's health and quality of life by addressing and preventing the root causes of ill health, not just focusing on treatment and cure"[4]. The emphasis is on "the process of enabling people to increase control over and improve their health"[5] by creating the conditions that support healthy behaviour.

Health promotion programs are intended to improve overall health and well-being, thereby preventing a wide range of illness and injury[6].

Prevention

Prevention can be defined as "actions aimed at eradicating, eliminating, or minimizing the impact of disease and disability, or if none of these is feasible, retarding the progress of disease and disability"[2]. Within this broad scope, prevention is typically recognized as having more specific levels of intervention along a continuum (Appendix A). This continuum of prevention broadly aligns with the continuum of care and is inclusive of health promotion.

Prevention programs are intended to prevent specific health problems that make a significant contribution to the burden of illness and injury.

Primordial
Preventing emergence of risk factors
(social & environmental conditions)

Primary
Preventing exposure to risk factors
(personal & communal efforts)

Secondary
Preventing disease progression
(early detection & intervention)

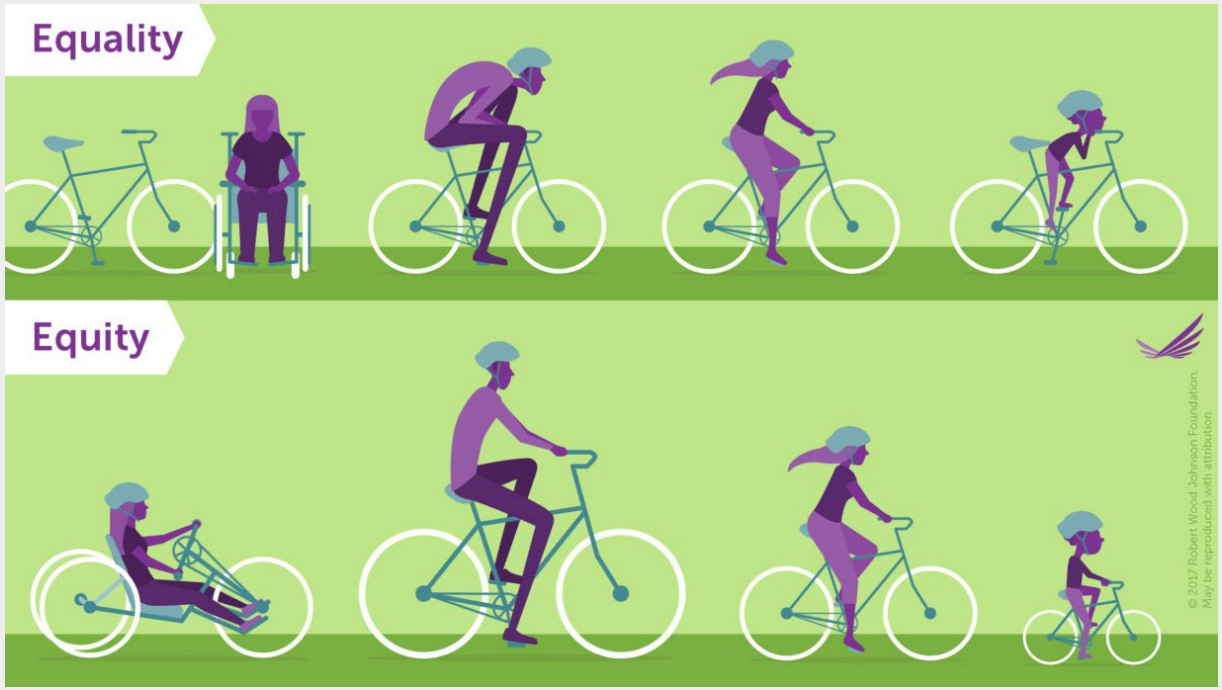
Tertiary
Preventing crises, disability and suffering
(effective management)

Quaternary
Preventing over-medicalization
(planning & alternatives)

Health Equity

Health equity means all people (individuals, groups and communities) are able to reach their full health potential and are not disadvantaged by social, economic and environmental conditions[7]. While health equity is often used as a positive term, health inequity considers the ethics of "differences in health which are not only unnecessary and avoidable but, in addition, are considered unfair and unjust"[8]. **An equity-enhancing health system goes beyond equal access to health services, and ensures equitable health outcomes for all** (Figure 2).

Figure 2. Example of Equality Compared to Equity



Source: 2017 Robert Wood Johnson Foundation

The People We Serve

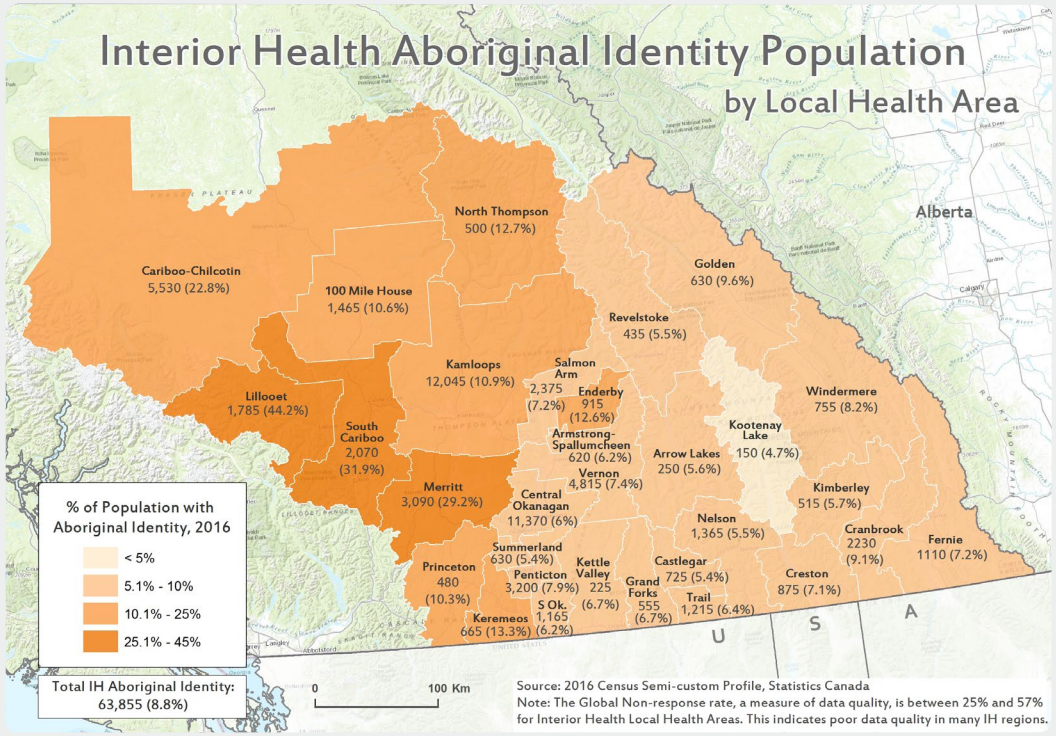
Size and Diversity

In 2018, just over 789,000 people lived in the IH region that covers a large area of about 215,000 square kilometres. More than half of the IH population (57%) lives in the more urban areas of Kamloops, Vernon, Central Okanagan and Penticton. The overall population density (3.5 people per km^{sq}) is lower than the B.C. average (5.1 people per km^{sq}), and much of the region can be described as rural and remote.

The Interior region is home to 54 First Nations communities and 16 Métis Chartered Communities, representing about nine per cent (63,855 people in 2016) of IH's population (6% for B.C.). The seven First Nations within the Interior are the Tsilhqot'in, Secwepemc, Dãkelh Dené, St'át'imc, Syilx, Nlaka'pamux and Ktunaxa. First Nations communities vary in size and include a number of small and isolated communities. The percentage of the population that self-identifies as Aboriginal is higher in the west of the region than in the east (Figure 3). Thirty-nine per cent of the Interior Aboriginal population self-identify as Métis, and the majority of Aboriginal peoples live off reserve.

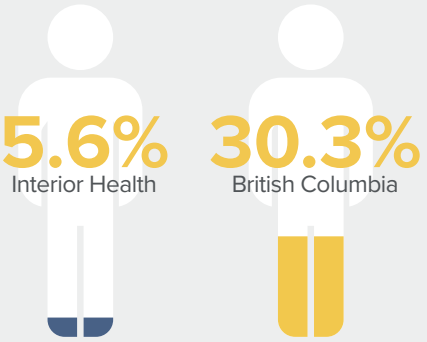
Other cultural groups and people who speak other languages may also face barriers to accessing services and sustaining health and wellness. The visible minority population (other than Aboriginal peoples) is relatively small in IH compared to B.C. (Figure 4). South Asian, Chinese and Filipino are the largest visible minority populations.

Figure 3. Percentage of Population Self-Identifying as Aboriginal, by Local Health Area



Source: 2016 Census Semi-custom Profile, Statistics Canada

Figure 4. Visible Minority Populations (other than Aboriginal Peoples) in IH Compared to B.C.



% of visible minorities within the total population

ETHNICITIES	%
South Asian	30.8%
Chinese	14.8%
Filipino	12.4%
Japanese	11.0%
Black	8.4%
Latin American	5.9%
Southeast Asian	4.7%
Korean	4.0%
Other visible minorities	8.1%

% of ethnicities within IH visible minority population

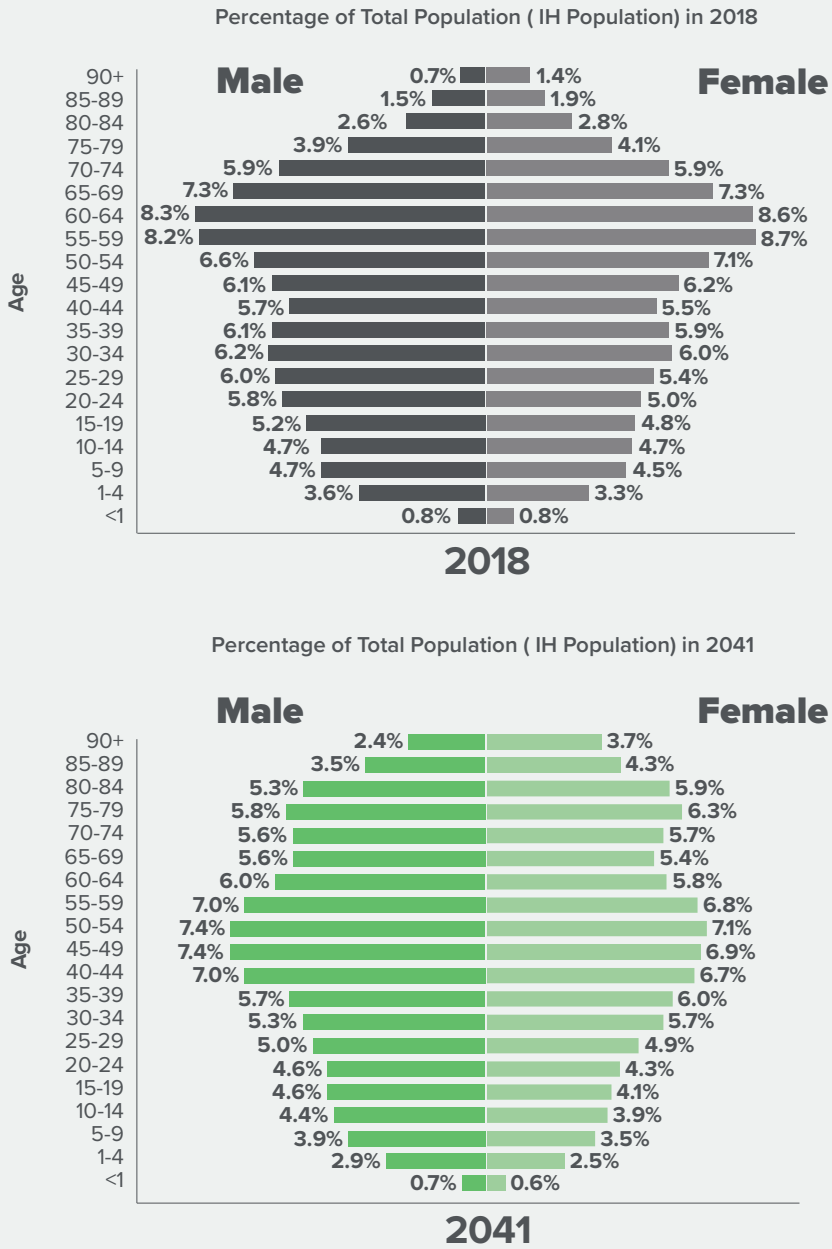
Source: 2016 Census, Statistics Canada

Age and Growth

Overall, the IH population is older than the B.C. population (median age 48 vs. 43 years). **The IH population aged 65+ years is projected to grow significantly over the coming years** (Figure 5). By 2041, 3 out of every 10 people in IH will be aged 65+. On average, women in IH can expect to live four years longer than men (83 vs. 79 years), which is similar to the difference across B.C. (84 vs. 80 years).

The Aboriginal population of B.C. grew by 39 per cent between 2006 and 2016, which was more than three times the overall population growth rate for B.C. The Aboriginal population is relatively young compared to the non-Aboriginal population, with an average age of 33 years (vs. 42 years for non-Aboriginal people), and about one quarter (27%) of the population under 15 years of age (vs. 14% non-Aboriginal).

Figure 5. IH Population Pyramids for 2018 and 2041 (Projected)

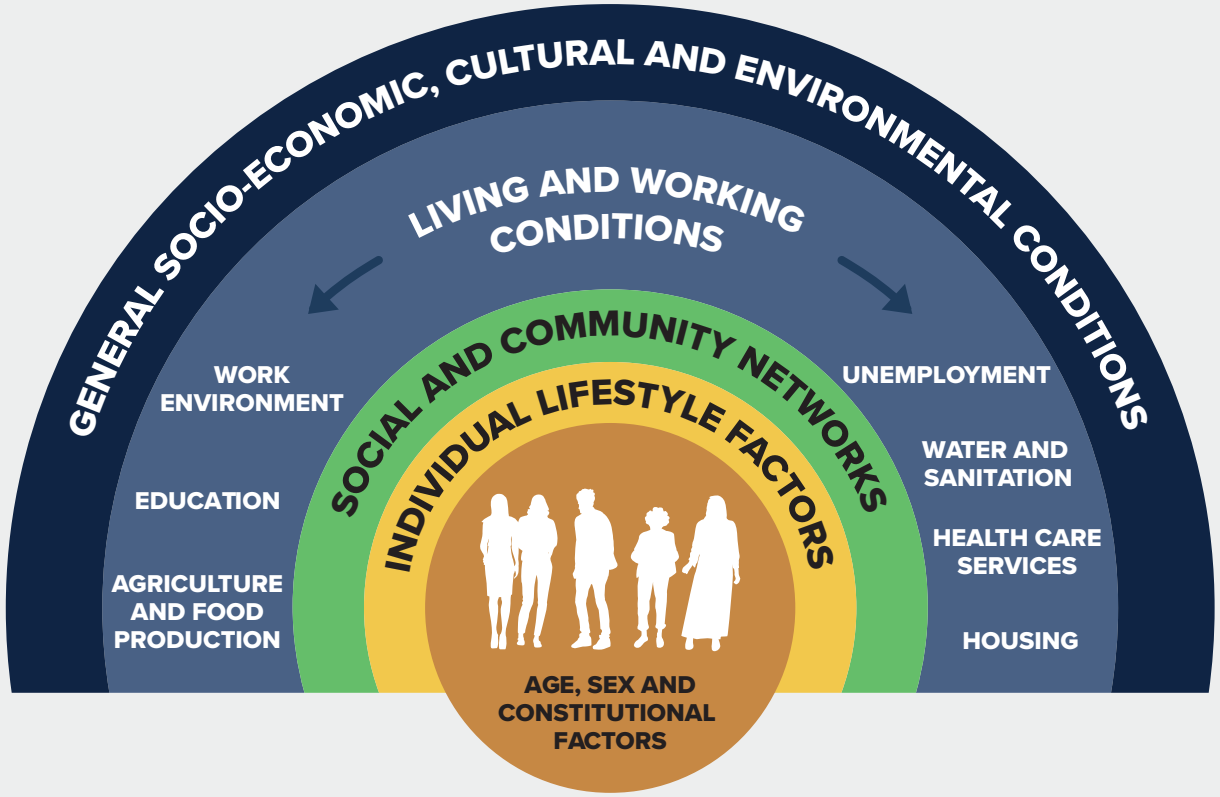


Source: PEOPLE 2019, B.C. Statistics

Health Determinants

The main determinants of health include income and social status, employment and working conditions, education and literacy, housing and other physical environments, access to health services, and other social and personal factors[9] (Figure 6).

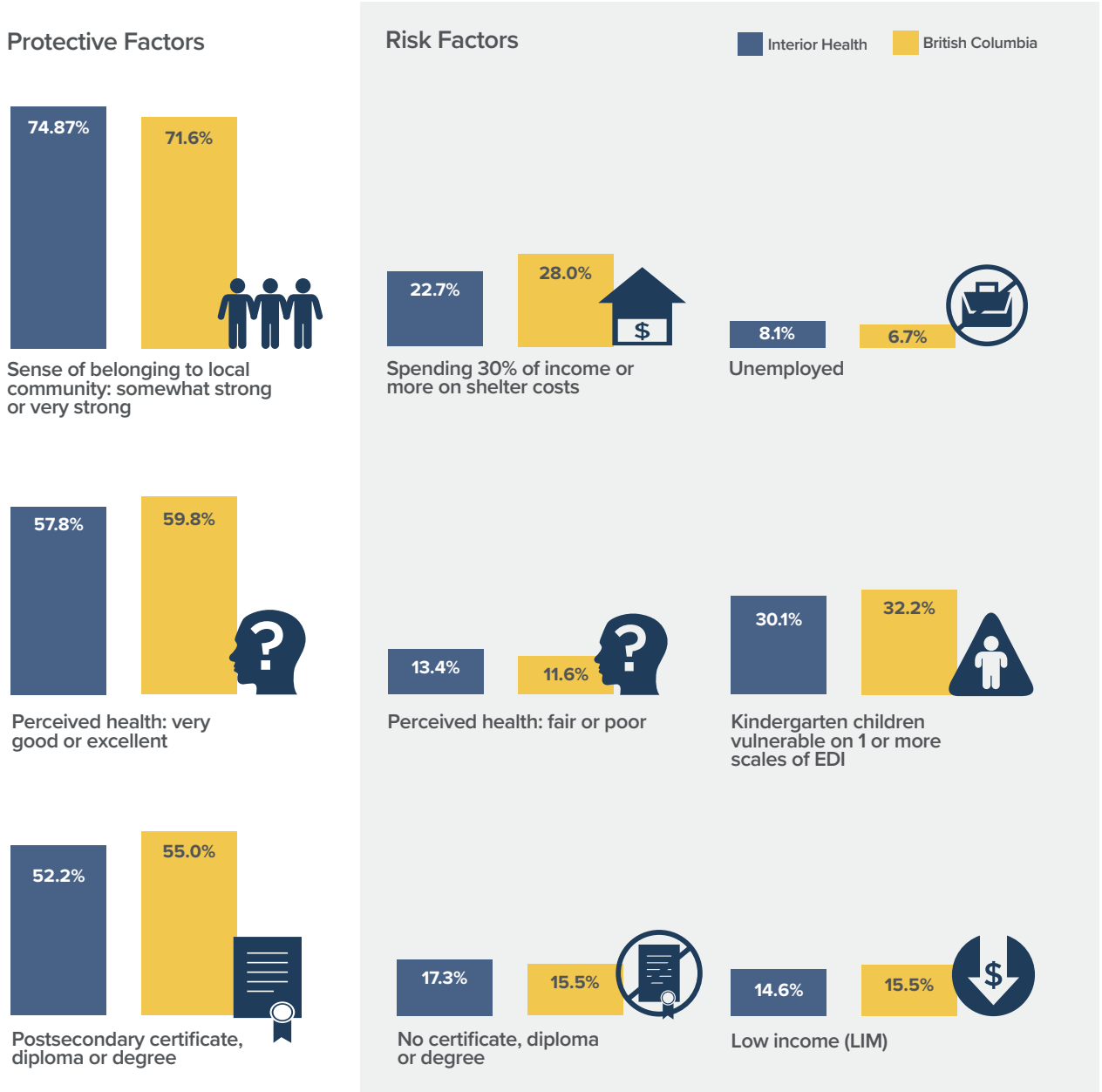
Figure 6. The Determinants of Health



Source: Dahlgren and Whitehead (1991)

IH and B.C. are similar across a broad range of risk and protective factors for health (Figure 7). While the majority of people in IH have a sense of belonging to their community and a positive perception of their health, there are significant numbers who have a low income, are unemployed, or have no educational certificate, diploma or degree. In addition, **3 out of 10 kindergarten children in IH have been assessed as "vulnerable"** using the Early Development Instrument (EDI). On average, housing is more affordable in IH than across B.C. However, significantly more Aboriginal people than non-Aboriginal people in IH (15% vs. 7%) report living in housing that needs major repair (2011 National Household Survey).

Figure 7. Risk and Protective Factors for Health in IH Compared to B.C.

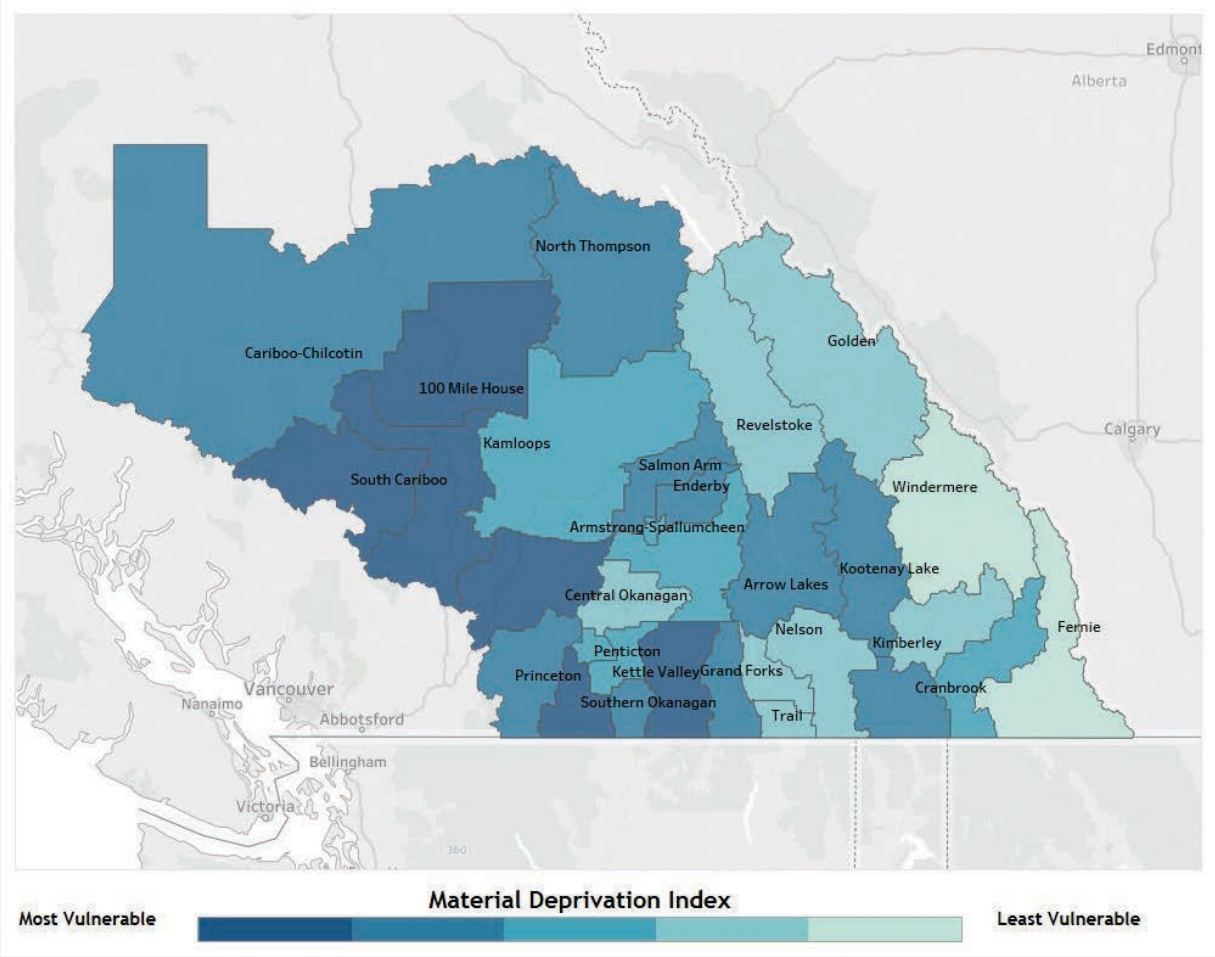


Sources: 2016 Canadian Community Health Survey; 2016 Census, Statistics Canada. EDI, 2013-16.

Health Disparities

The broad similarity between IH and B.C. populations across a number of social and economic measures hides the substantial variation that exists across the IH region. This variation can be illustrated using the provincial index of material deprivation that combines measures of education, employment and income. The clear gradient, from higher levels of material deprivation in the west of the IH region to lower levels in the east (Figure 8), is inversely correlated with health and wellness measures that tend to improve from west to east (see IH Child Health Report 2018 for examples).

Figure 8. Material Deprivation Index (Quintiles) by Local Health Area



Source: B.C. Centre for Disease Control (BCCDC)
Note: The MDI was derived in 2017, and was based on CensusPlus 2011 data.

Primary & Community Care

Primary and community care (PCC) services are fundamental to delivering new models of clinical care outside of hospitals. **A health system with strong PCC delivers better health outcomes, efficiency and improved quality of care** compared to other models[10]. This chapter explores how a population health approach can support PCC, and how PCC can impact health and wellness at a population level.

What do we see from a population health perspective?

Opportunities for Chronic Disease Prevention

Chronic diseases[A], such as heart disease, diabetes, cancer, osteoarthritis and mood/anxiety disorders, are the major cause of death and illness in Canada[11]. The causes (risk factors) of chronic diseases are well established, with a small set of common risk factors contributing to the development of the main chronic diseases (Figure 9). While some risk factors are fixed, many risk factors associated with health behaviour can be modified. These causes are expressed through intermediate biological conditions that, in turn, lead to chronic disease. Social, economic and environmental conditions also shape behaviour and indirectly affect other biological factors[12].

Figure 9. Common Risk Factors for the Main Chronic Diseases

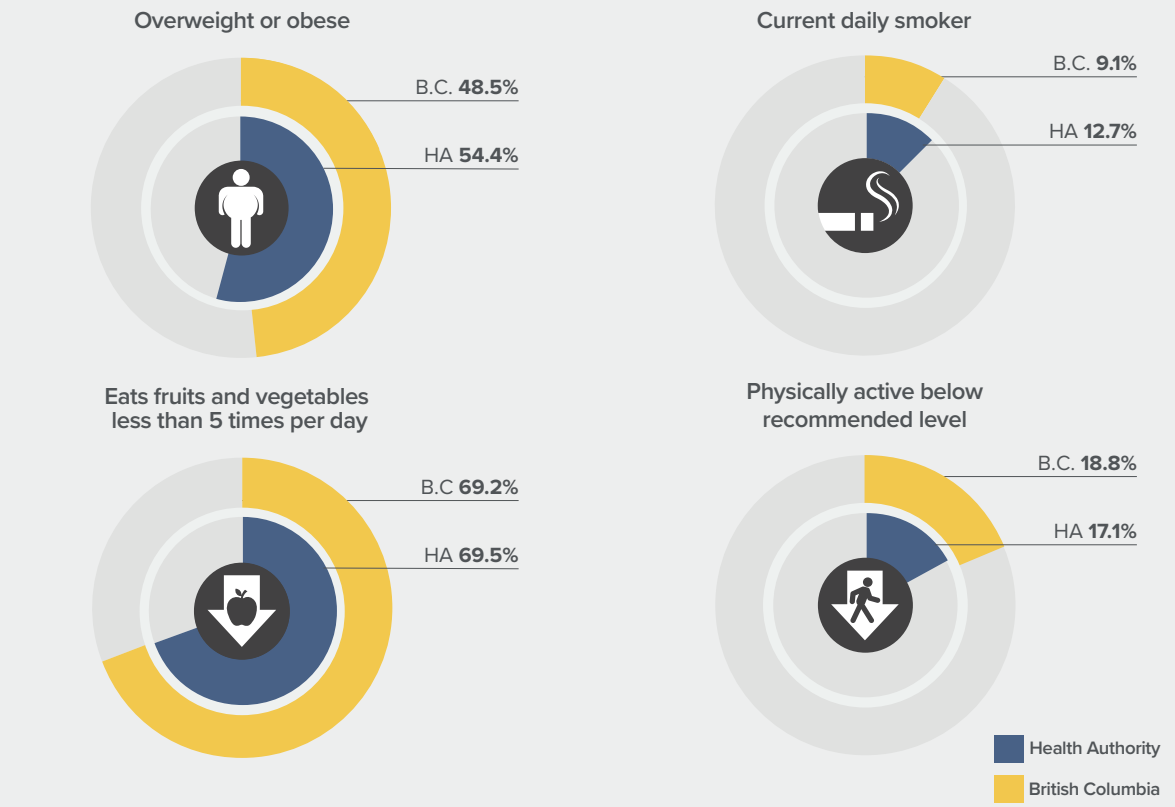
Source: Adapted from World Health Organization

A. Chronic diseases include acute myocardial infarction, Alzheimer's Disease and other dementia, angina, asthma, chronic kidney disease, chronic obstructive pulmonary disease, depression/anxiety, diabetes, epilepsy, gout/crystal arthropathies, heart failure, hypertension, ischemic heart disease, mood/anxiety disorders, juvenile idiopathic arthritis, multiple sclerosis, osteoarthritis, osteoporosis, Parkinsonism, rheumatoid arthritis, schizophrenia, hemorrhagic stroke hospitalized, ischemic stroke hospitalized, stroke hospitalized (including hemorrhagic and ischemic) and transient ischemic attack hospitalized.

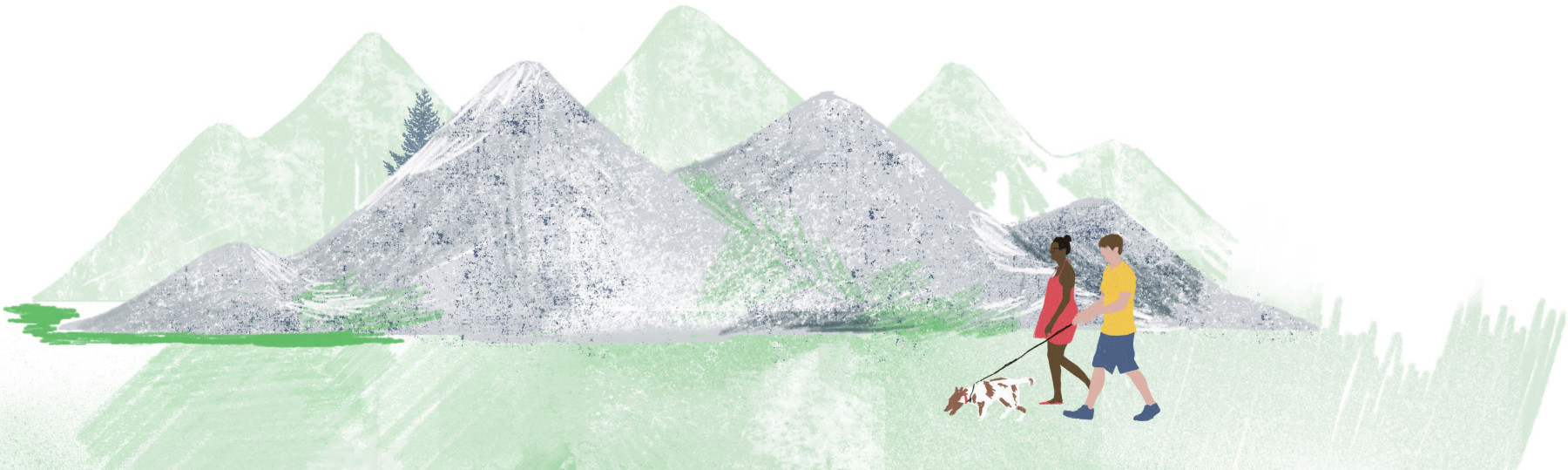
Health Behaviour

More than half of the IH population aged 18+ reported themselves as overweight or obese in the 2016 Canadian Community Health Survey (CCHS), compared to just under half for B.C. (Figure 10). While levels of physical activity in IH were high, most people ate fewer servings of fruit and vegetables than recommended. **About 1 in 8 people aged 12+ in IH smoked cigarettes every day**, which was higher than the B.C. average.

Figure 10. Percentage of IH Population Exhibiting Key Risk Factors Compared to B.C.



Source: 2016 CCHS (provided by BCCDC)

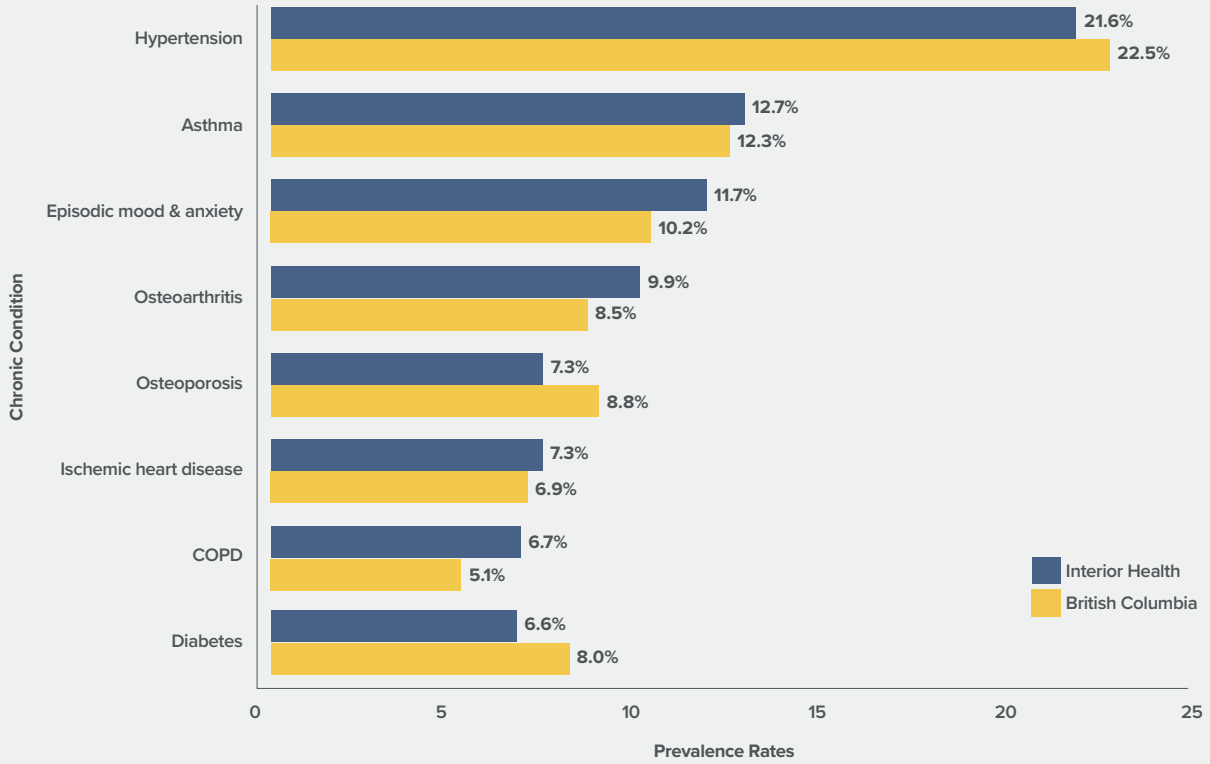


Chronic Diseases in IH

Hypertension stands out as the most common chronic disease in IH and B.C., experienced by about 1 in 5 people in 2017 (Figure 11). Other common diseases involve circulatory (ischemic heart disease (IHD)), respiratory (asthma, chronic obstructive pulmonary disease (COPD)), and endocrine (diabetes) systems, mood/anxiety disorders and bones/joints (osteoarthritis, osteoporosis). Prevalence rates were notably higher in IH than B.C. for mood/anxiety disorders (recent episodes), osteoarthritis and COPD, and notably lower for osteoporosis and diabetes. Mood/anxiety disorders and bone/joint conditions are detailed further in other chapters of this report.

Reducing chronic disease risk, detecting disease early and intervening quickly to control disease have significant potential to reduce premature deaths and disability from chronic disease. The overall decrease in the rate of new cases of hypertension, COPD and IHD between 2013 and 2017 is consistent with national trends and provides some evidence of success.

Figure 11. Age-Standardized Prevalence Rates for Common Chronic Diseases, 2017



Source: Chronic Disease Registry, B.C. Ministry of Health, 2016/17 (extracted from the BCCDC Chronic Disease Dashboard)

Cancer in IH

Given differences in outcome for various types of cancer, the impact of cancer at a population level is best described by the rate of new cases (incidence) and deaths rather than the proportion of cases in the population at a given time (prevalence).

The rate of new cases of all cancers, taking into account age, was similar between IH and B.C. (520 and 504 per 100,000) over the five years from 2011 to 2015. The same is true for the rate of deaths from cancer in IH and B.C. (203 and 187 per 100,000). New cancer cases are expected to increase in IH with the aging and growing population, and with people living longer. The likely course and outcome of cancer depend on many factors, including the accessibility of prevention, early detection and treatment services.

The four most common types of cancer in IH, in terms of new cases, were also in the top five causes of death from cancer (Figure 12). Of particular note is lung cancer, which has high incidence and mortality rates. Tobacco smoking is the number one cause of lung cancer[13]. About 85-90% of lung cancer patients are smokers, former smokers or people exposed long term to second-hand smoke. The average smoker will die about eight years earlier than a non-smoker.

Radon, a naturally occurring radioactive gas that can accumulate in homes and other indoor spaces, is the second leading cause of lung cancer. Cumulative exposure over a lifetime increases the risk of harm, so it is beneficial to test locations that may have elevated radon levels so that relatively simple steps can be taken to reduce exposure. National and provincial surveys of radon concentrations in homes found the potential for radon exposure to vary across IH and to be above the Canadian Guideline level (200 Bq/m^3) in a significant proportion of homes in some areas[14]. The combined health effects of tobacco and radon exposure are synergistic, so reducing either of the exposures substantially reduces the risk of lung cancer[15].

Figure 12. Age-Standardized Incidence and Mortality Rates for the Top Five Types of Cancer, 2015

NEW CASES		DEATHS	
CANCER TYPE	AGE-STANDARDIZED RATE PER 100,000	CANCER TYPE	AGE-STANDARDIZED RATE PER 100,000
1. Breast	69.2	1. Lung	50.5
2. Lung	69.1	2. Colorectal	22.4
3. Colorectal	65.8	3. Prostate	14.2
4. Prostate	48.9	4. Pancreas	13.9
5. Bladder	27.5	5. Breast	12.7

Source: BC Cancer Statistics Dahsboard developed by the BC Cancer Registry

Communicable Diseases

Today, communicable diseases represent a lesser burden of disease in IH than chronic diseases. However, with the recent measles cases in IH, seasonal impact of respiratory and gastrointestinal illnesses, and occasional outbreaks of other communicable diseases (e.g. food-borne or sexually transmitted), **the prevention and control of communicable disease remains an important population health priority.**

Meningococcal disease, pneumococcal disease and pertussis are vaccine-preventable diseases that can cause serious illness and complications. Despite universal childhood immunization, we continue to see vaccine-preventable diseases.

Health for Everyone, by Everyone: What can we do using a population health approach?

Clinical Prevention

PCC is one part of a complex health and care system, but it is unique in providing support to patients and families along a continuum from staying healthy to end-of-life care. Along this continuum, **there are many opportunities for PCC to prevent or minimize the impact of disease and injury.** The Lifetime Prevention Schedule (2018)[16] sets out the priorities for clinical prevention services in IH, based on evidence of what works, is good value for money and has a positive impact on population health. These services include immunizations, screening (e.g. for perinatal depression, HIV, alcohol, cancer, cardiovascular risk and diabetes), behavioural interventions (e.g. for smoking and obesity) and preventive medications/ devices (e.g. statins). The following examples are included for illustration.

Cases of Select Vaccine-Preventable Diseases Reported in IH Over the Past Five Years (2014 to 2018)

28
Meningococcal disease cases

377
Pneumococcal disease cases

718
Pertussis cases

Immunization

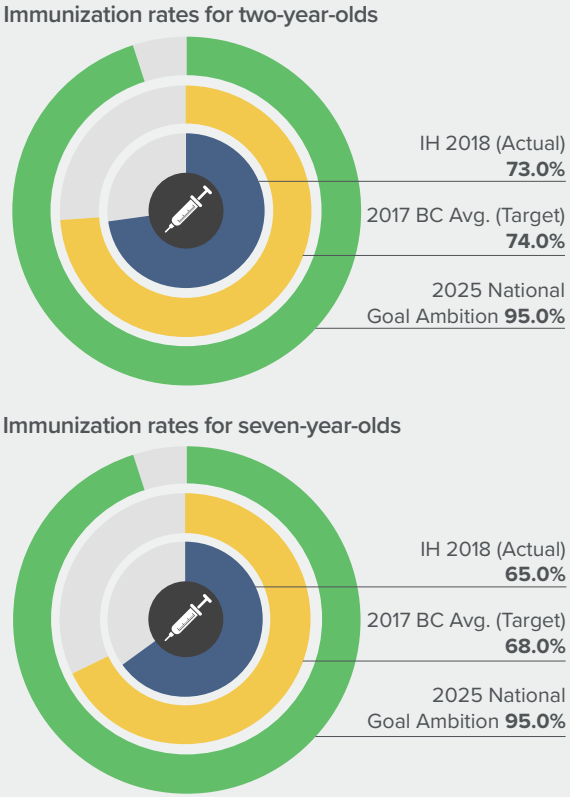
Immunization is a critical strategy for preventing a variety of communicable diseases that cause illness, disability and death, and for reducing the demand for health-care services. Three quarters of two-year-olds in IH, and two thirds of seven-year-olds, were up to date with all their immunizations in 2018. Although immunization coverage is on target for two-year-olds, and slightly below target for seven-year-olds, **sustained efforts are needed to achieve the high vaccination coverage goals that have been established nationally to achieve population protection from vaccine-preventable diseases** (Figure 13). A review has been undertaken to identify opportunities to improve immunization service delivery and increase coverage.

Cancer Prevention and Early Detection

The human papilloma virus (HPV) causes about 90% of cervical cancers. HPV-related cancers can be safely and effectively prevented by the HPV vaccine, which is part of B.C.'s publicly funded school immunization program and is offered to both girls and boys in grade 6. About two thirds (65% females, 63% males) of grade 6 students in IH were up to date with their HPV immunization in 2018, which was similar to the B.C. average.

High-quality, population-based screening programs for the early detection of cancer or precancerous conditions are essential components of a comprehensive cancer strategy. Rates of participation in colon screening have been increasing steadily since the start of the organized, population-based BC Colon Screening Program in 2013. By 2016, about 4 out of 10 eligible people (aged 50-74 years) in IH were participating (34% for B.C.). Although participation rates were higher for more established cervix- (74%) and breast- (53%) screening programs, rates have decreased slightly over recent years. The reason for this decline is multifactorial, likely reflecting changes in access to primary care, population demographics and awareness of screening recommendations.

Figure 13. Childhood Immunization Coverage in IH (2018) Compared to B.C. Averages (2017) and National Goals (by 2025)



Source: Communicable Diseases and Immunization Services, BCCDC

Health Equity

Primary care networks (PCN) are local groups of primary and community care providers that work together to meet the health-care needs of people living within a certain geographic area. "Attachment" involves connecting people to a network of community-based health-care providers (e.g. physicians, counsellors, dietitians, midwives, public health nurses, social workers and traditional healers). In October 2019, more than 1 in 5 (22%) people in IH were not attached to primary care.

Attachment alone will not significantly impact health outcomes. The opportunity comes from connecting healthy individuals to health promotion and prevention services so they can stay healthy, and giving priority access to population groups that have the greatest potential to benefit from holistic, culturally safe and responsive care. Priority populations include:

- Mental health and substance use clients
- Seniors aged 75+ who are not attached to primary care
- Patients with chronic diseases
- Mothers and their babies who are not attached to primary care
- Vulnerable groups that experience social exclusion or self-identify as facing barriers to accessing primary care in traditional settings

New models of primary care are critical to enhancing health equity. For example, Community Health Centres will integrate primary care, health promotion and social supports that address the determinants of health (e.g. housing, employment, income and food security).

Healthy Communities

In support of PCNs, **population health professionals have a key role** in interpreting data, providing evidence-based advice, advocating for priority populations, and collaborating with community partners to create the social, economic and environmental conditions for health and healing. For example, IH's Healthy Community Development Team provides information, advice and guidance to local governments on the development of Healthy Living Strategic Plans (HLSP) that address the determinants of health (e.g. healthy neighbourhoods, housing, transportation systems, natural environments and food systems).

Forty-five out of 60 municipalities in IH had an HLSP by December 2019, and numerous other communities had Partnership Agreements or were engaged in healthy communities work.

In support of the health and wellness of populations, PCNs can have an important role in amplifying public health messages, providing information and brief advice on behavioural risk factors, and leveraging the trusted voice of the primary care team in local communities.

45

out of 60 municipalities in IH had an HLSP by December 2019, and numerous other communities had Partnership Agreements or were engaged in healthy communities work.

Finding Belonging in the Community

Jana, a young mother, has just given birth to her second child. She and her partner have recently moved to the community following a change in her partner's employment. Jana visits a community health centre for her baby's immunization and is screened for depression as part of the standard visit. This leads to a conversation where she describes having experienced depression following the birth of her first child. She has similar feelings now, and is concerned about her health and the health of her child. Her partner is away for long periods of time with work, and Jana has few people to turn to for support.

The public health nurse refers Jana to her family physician for follow-up and provides Jana with resources that identify community groups that help newcomers to make connections and settle in their new community.

Jana is encouraged that these services are optional, free and culturally sensitive. Soon, Jana is actively participating in several community groups, and is receiving health care for her postpartum depression. With this support, Jana feels more comfortable talking to her partner, who has been able to adjust some of his employment obligations in order to be at home more often.

Recommendation 1:

To enhance the role of primary and community care in improving population health and health equity. Examples include:

- Integrating health promotion and prevention into primary care and its wider community context
- Limiting the impacts of the determinants of health through new models of primary and community care

Mental Health & Substance Use

Mental health is an important part of our overall health and includes the capacity to enjoy life, form and sustain relationships with others, achieve our goals, effectively manage challenges and contribute to the community[17]. Poor mental health can range from mild anxiety to severe and enduring mental illness, and can have a wider impact on families, communities and society as a whole. A strong foundation of social and emotional resilience gained in early childhood can lead to a healthy, happy and productive life.

Substances can be defined as any mood-altering compound with the potential to cause health and social problems[18]. These substances may be legal (e.g. alcohol, cannabis and tobacco) or illegal (e.g. illicit opioids and stimulants). While most people use substances socially or recreationally with no harm, substance use can become problematic and lead to significant health and social harms.

This chapter explores the population-level impacts of mental health and substance use, and the opportunities for health promotion and prevention.

What do we see from a population health perspective?

Mental Health and Illness

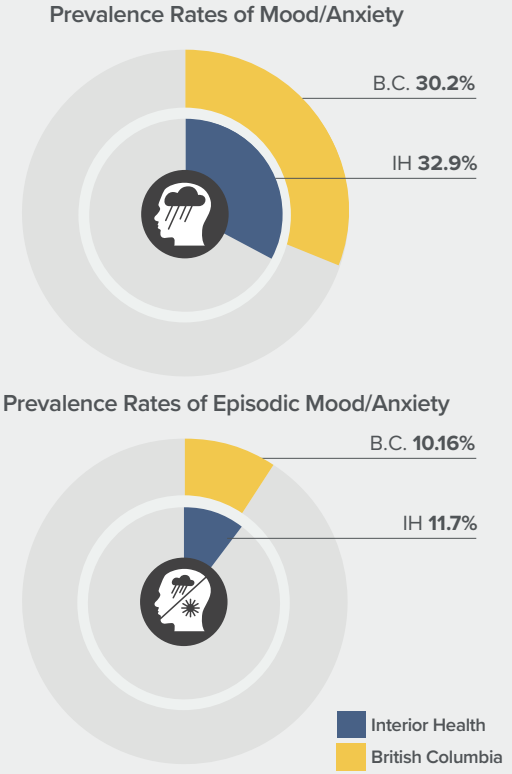
Mood/anxiety disorders are a broad category of psychological conditions that include depression, generalized anxiety and bipolar disorder. Depression accounts for the majority of mood/anxiety disorders. In 2017, one third of people in IH had experienced a mood/anxiety disorder at some time in their life, and about 1 in 10 people had experienced a recent episode (Figure 14). These prevalence rates have been consistently higher in IH than B.C. That said, 9 out of 10 people in IH who responded to the 2016 CCHS had a positive perception of their mental health.

Suicide

From 2007 to 2017, the rate of suicide deaths was consistently higher in more rural health authorities in B.C. (Interior, Island and Northern) than more urban health authorities (Vancouver Coastal and Fraser). In 2017, **IH had the second highest rate of suicide deaths** (17 per 100,000 persons) and accounted for nearly one quarter of all B.C. suicide deaths[19]. The suicide death rate in IH for seniors aged 65+ decreased steadily between 2013 and 2017, and was consistently higher than the B.C. average. Over the same period, the average suicide death rate in young adults aged 15 to 24 years was also higher in IH than B.C. (14 vs. 9 per 100,000). In both age groups, **8 out of 10 suicides between 2001 and 2015 were by males.**

Child vulnerability is defined by the Human Early Learning Partnership as "the portion of the population that, without additional support and care, may experience future challenges in school and society"[20]. While the relationship between child vulnerability and young adult suicide is complex, it is notable that the social vulnerability of kindergarten children in IH (based on the Early Development Instrument) increased steadily between 2007/09 (10% vulnerable) and 2013/16 (15% vulnerable). There was a similar trend in emotional vulnerability (12% to 17%).

Figure 14. Age-Standardized Prevalence Rates for Mood/Anxiety Disorders, 2017



Source: Chronic Disease Registry, B.C. Ministry of Health, 2016/17 (extracted from the BCCDC Chronic Disease Dashboard)

#2

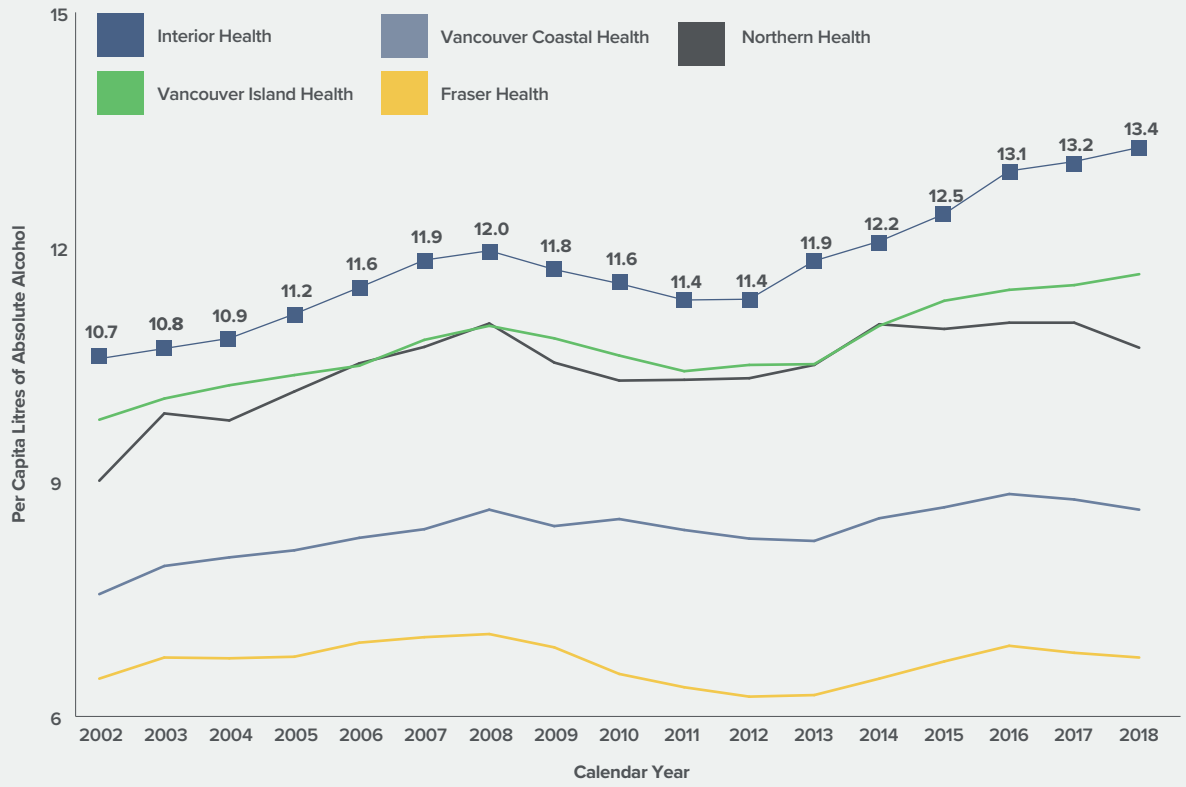
In 2017, IH had the second highest rate of suicides among B.C. health authorities.

Alcohol-Related Harm

Alcohol has emerged as an important population health issue in IH. Since 2002, the average amount of alcohol consumed per person in IH has been consistently higher than in any other B.C. health authority, and there has been an overall trend of increasing alcohol consumption (Figure 15). Alcohol consumption is higher in more rural health authorities than more urban health authorities, and the gap between health authorities is widening.

Alcohol consumption may reflect the economy and availability of alcohol in the Interior region, with prime industry sectors including wine and tourism. While there are social and economic benefits of alcohol, increasing levels of drinking have negative impacts on individual and community health (e.g. intoxication, injury, intimate partner violence, high-risk sexual behaviour, chronic disease risk, absence from work and lost productivity).

Figure 15. Annual Per Capita Alcohol Consumption in B.C. Health Authorities 2002-2018



Source: Canadian Institute for Substance Use Research

Figure 16. Standardized Rate of Alcohol- and Tobacco-Related Hospitalizations (per 100,000) 2007 to 2016, with Three-Year Linear Projection to 2019

Source: Canadian Institute for Substance Use Research

Coinciding with the trend in alcohol consumption in IH, there was an overall increase in the rate of hospitalizations from conditions related to alcohol between 2007 and 2016 (Figure 16). For comparison, the rate of tobacco-related hospitalizations decreased over the same period and is projected to drop below the rate for alcohol. Since 2012, IH has been the health authority with the highest rate of alcohol-related hospitalizations. The same trends were apparent for the rate of alcohol-related deaths.

According to the 2018 Adolescent Health Survey (McCreary Centre Society)[21], there has been a declining trend in the percentage of students in Grades 7-12 reporting they had used alcohol before age 15, among those who have ever used. There has been a similar declining trend for cannabis. Across B.C., rates of early initiation are higher in more rural health authorities than more urban health authorities. Since this survey, the non-medicinal use of **cannabis has been legalized and vaping has emerged as a health risk,** particularly for young people.

Youth Vaping

Vaping is the inhaling of an aerosol or vaporized e-substance produced by an electronic cigarette or other vaping device. E-substances may or may not contain nicotine or flavouring compounds. **Vaping can lead to nicotine addiction, and nicotine exposure can alter brain development in youth.**

In the 2018 Adolescent Health Survey, IH had the highest rate (29%) in B.C. of youth reporting they had used a **nicotine** vape pen or stick in the past 30 days (among all youth). About 1 in 4 youth in IH reported they had used a **non-nicotine** vape pen or stick in the past 30 days.

To reduce youth vaping, IH has collaborated with stakeholders to develop a toolkit of education and health promotion materials. In addition, school districts have been supported to share evidence-based information with students and families, community grants have been awarded for public information events, and a social media campaign has been launched to raise awareness of the harms of vaping. These activities align with the B.C. Ministry of Health's newly released Vaping Acton Plan.

The long-term effect of exposure to a range of harmful chemicals through vaping remains unknown, but emerging evidence suggests an increased risk of respiratory disease. In response, IH has established an internal surveillance process for reporting cases of vaping-associated pulmonary illness (VAPI). By year-end 2019, three cases of VAPI had been identified across B.C.

Health for Everyone, by Everyone: What can we do using a population health approach?

Community-Based Support

Consistent with a stepped-care model, IH's most specialized and intensive mental health and substance use services are reserved for a relatively small population with the greatest care needs. However, **the greatest impact at population and system levels arises within the population that experiences mild to moderate mental health and substance use issues**, because they are more numerous. This paradox highlights the need for community-based supports that rely more on non-specialist support (e.g. peer support networks and recovery coaches, school-based mental health services), and less on specialized and intensive health services[22]. To make a difference, this complex system of care needs to be person-, family- and community-centred; inclusive; and culturally safe, with coordinated access and seamless transitions.

Mental health promotion refers to positive actions taken to strengthen mental health that include creating supportive environments (e.g. housing, employment and social support), reorienting mental health services (e.g. early intervention, recovery-oriented, strengths-based), developing healthy public policy (e.g. workplace policies), and strengthening community action (e.g. cross-sector collaboration and nature connectedness)[23]. **IH's Aboriginal Mental Wellness Plan also recognizes the connectedness of mental, physical, emotional and spiritual wellness**, with a strong focus on patient, family and community centredness.

Benefits of Early Help and Coordination

A high school teacher discovers that a grade 8 student, Jon, has brought a vape pen to school and shared it with a number of friends. In a conversation with his teacher and his guidance counsellor, Jon describes participating in substance use at home with his 21-year-old brother, including vaping, drinking and smoking pot.

Having previously interacted with the Preventure primary prevention program at school, Jon shows some skills in discussing his feelings, particularly in how they relate to his substance use and how he reacts to challenging circumstances. Based on staff training around substance use, the guidance counsellor identifies a local physician who is experienced in youth substance use. At the same time, in contacting each of the families of the students who were vaping, she takes the opportunity to mention the local Foundry Centre that provides integrated health and social services to youth and their families. This resonates with Jon's mother, who has been struggling to cope with the situation.

The incident at the school and the response to it provide points of access to support not only Jon, but his older brother and his mother. Through early help and coordination, Jon and his family are equipped with the tools they need to thrive.

Recommendation 2:

To promote positive mental wellness through evidence-based, community-focused actions. Examples include:

- Working together with community partners to create the social, economic and environmental conditions that improve mental health
- Reducing the health and social harms associated with substance use through population and patient-based interventions

Seniors Care

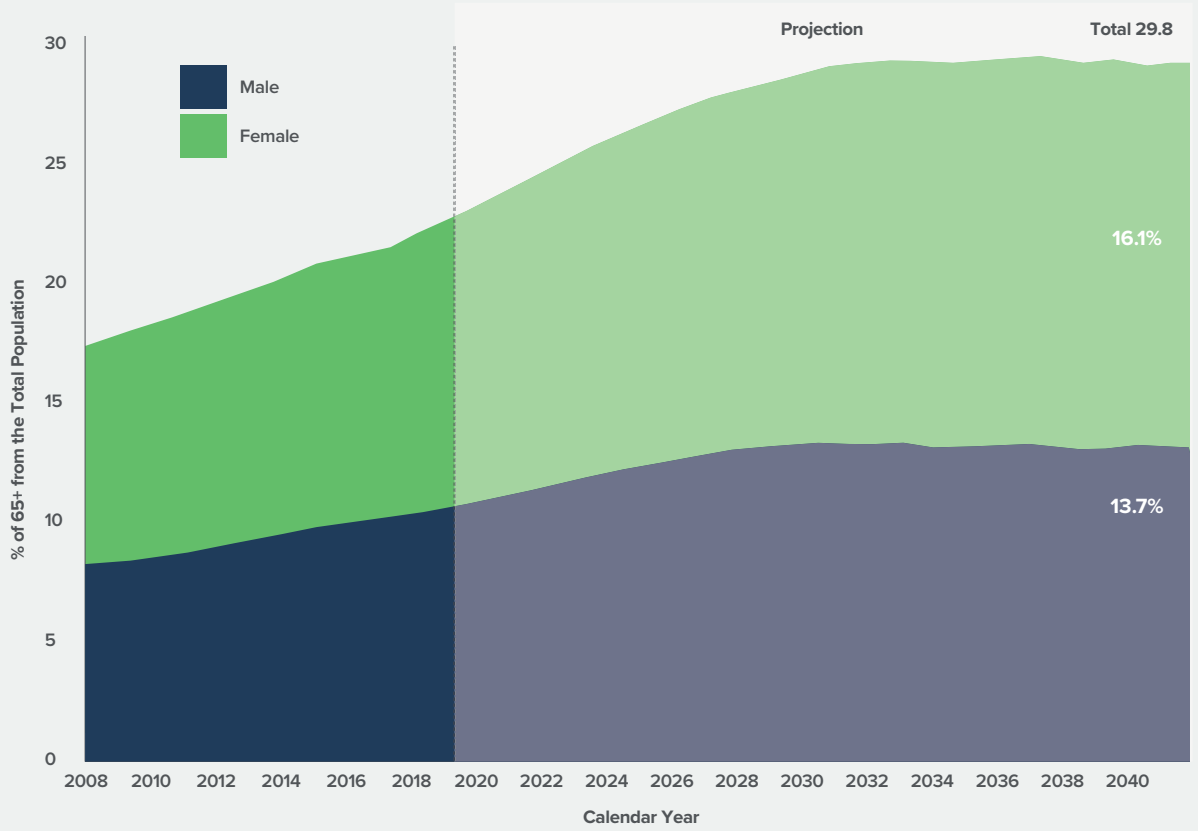
While many seniors enjoy long, healthy and independent lives, and are a valuable resource to their families, communities and economies, others face significant health and care challenges. Being free of disease or infirmity is not a requirement for healthy aging, as many seniors with well-controlled health conditions continue to enjoy a high quality of life and make an important contribution to society[24]. **Healthy aging is about creating the environments and opportunities that maintain functional ability and enable good health and well-being in later life**. This chapter explores these environments and opportunities in IH.

What do we see from a population health perspective?

Aging Population

The percentage of the IH population aged 65 years and over has increased steadily over the last decade (Figure 17). Continued growth is projected to around 2030, when the population aged 65+ will level off. The female population aged 65+ is projected to grow at a faster rate than the male population, likely reflecting the difference in life expectancy between men and women.

Figure 17. Growth in Seniors Population Aged 65+ by Sex, 2008 to 2018, with Projection to 2041



Source: B.C. Statistics Sub-provincial Population Estimates and Projections (P.E.O.P.L.E. 2019)

Chronic Disease Management

Various measures can be used to describe the health and wellness of seniors (Figure 18). For example, **in IH, 9 out of 10 seniors aged 65+ have one or more chronic diseases**, and more than half have three or more conditions. The prevalence of Alzheimer's disease or other dementia increases substantially in the 80+ population. While many seniors have activity-limiting injuries or live alone, the majority feel a sense of belonging to their local community. In 2018/19, more than 6,800 seniors aged 65+ (4% of the IH population aged 65+) lived in long-term care (LTC) facilities where their health and social care needs could be met.

Figure 18. Health and Wellness Measures for Seniors Population Aged 65+

3.8%
Living in long-term care (LTC) facilities (2018/19)

26.0%
Living alone (2011)

78.8%
"Very strong/somewhat strong" belonging to community (2016)

38.7%
Injuries that limit normal activities (2016)

13.3%
LTC residents assessed as having a fall in last 30 days (2018/19)

2.4%
65-79 yrs Alzheimer's disease or other dementia (2017)

16.9%
80+ Alzheimer's disease or other dementia (2017)

89.0%
One or more chronic diseases (2017/18)

58.2%
Three or more chronic diseases (2017/18)

2.6%
Life "extremely stressful" (2016)

28.5%
Life "not at all stressful" (2016)

Sources: B.C. Ministry of Health, Chronic Disease Registries Profile 2017; B.C. MOH Chronic Disease Dashboard; 2016 CCHS; 2011 Census, Statistics Canada; CIHI Quarterly Data (provided by IH Strategic Information Management).

Health for Everyone, by Everyone: What can we do using a population health approach?

With the goal of keeping seniors healthy in their community for as long as possible, organized efforts should focus on preventing the injuries and illnesses that lead to hospitalization, surgery and the need for higher levels of care.

Community Care Facilities

While the majority of seniors live independently and benefit from a healthy community environment (see Primary and Community Care chapter), some seniors will need additional care.

In support of health and social care services, IH licensing officers have a duty under the Community Care and Assisted Living Act (CCALA)[25] to review all aspects of LTC facilities and ensure that minimum standards for health and safety are met. Across IH, there are:

69

Community care facilities regulated under the CCALA that provide LTC to seniors

10

Hospital sites providing LTC under the Hospital Act

5,928

Publicly funded LTC beds (4,546 community and 1,383 hospital), not including hospice and specialty beds within other programs

Licensing officers inspect community care facilities and follow up complaints to ensure appropriate client care, staff supervision, infection control, food preparation, and safe physical and social environments. The majority (86%) of these facilities have been assessed as low risk to clients in care. To achieve and maintain regulatory compliance, licensing officers work collaboratively with facilities to build capacity and resolve issues.

Prevention and Control of Communicable Diseases

The prevention and control of communicable diseases are also essential for maintaining a healthy living environment. Influenza is a contagious respiratory illness caused by an influenza virus[26]. Influenza can lead to pneumonia and other complications, particularly in persons with chronic disease. As such, seniors aged 65+ are especially vulnerable.

50

Respiratory infection (RI) outbreaks in LTC facilities during the fall and winter of 2018/19 (September to May), of which 14 outbreaks were associated with influenza

In hospital facilities, influenza accounted for 9 out of 10 RI outbreaks. The seasonal impact of facility outbreaks is influenced by multiple factors, such as the characteristics of the circulating influenza strain(s), vaccine effectiveness, and infection prevention and control measures, so is difficult to compare between seasons. Within each season, however, **sustained efforts are needed to encourage influenza immunization for IH staff and clients, and to identify and control RI outbreaks early.**

During the same 2018/19 season, influenza immunization coverage for the 6,800 residents of LTC facilities in IH (80%) was the lowest of the five health authorities in B.C. Coverage for the 8,600 health-care workers in LTC facilities (66%), was also below the provincial coverage (74%), and the lowest coverage since the 2011/12 season. In contrast, the coverage for hospital facility staff (82%) was higher than the provincial coverage (78%), and the highest ever.

Across a broad range of health determinants and outcomes, collaborative action that promotes good health and well-being, prevents the early onset of illness and disability, and is quick to detect and address health issues as they arise can help seniors maintain their health, independence and unique contribution to society.

Making Each Contact Count

Lyn brings her elderly father, Chen, to an IH immunization clinic for his annual flu vaccine. Lyn mentions to the nurse that she lives 45 minutes away from the rural location where Chen lives alone, and expresses concern that she is not around as much as she would like.

Noticing that Chen has some mobility issues, the nurse talks to Chen about the risk of falling. Chen says that he has not really discussed this with anyone, partly because he is worried about losing his independence.

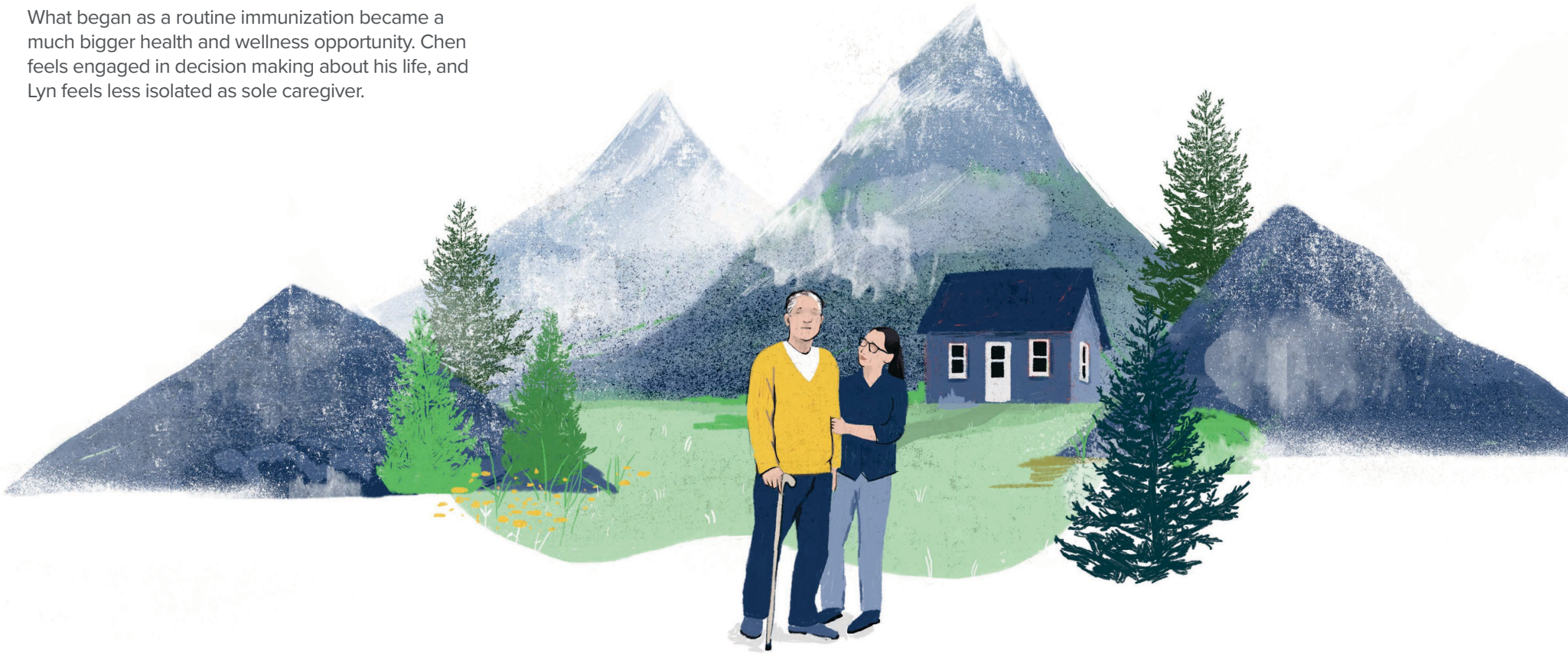
The nurse identifies the IH Guide to Home and Community Care as a potential resource for Lyn and her father. The nurse also makes a referral to the SAIL (Strategies and Actions for Independent Living) Home Activity Program to support Chen's strength, balance and agility.

What began as a routine immunization became a much bigger health and wellness opportunity. Chen feels engaged in decision making about his life, and Lyn feels less isolated as sole caregiver.

Recommendation 3:

To help seniors stay their healthiest in their community for as long as possible. Examples include:

- Enhancing community-based chronic disease management, palliative and end-of-life care supports, and social supports, including links to health-care and community resources
- Supporting the development of age-friendly communities and healthy environments that support seniors' health, wellness and independence



Aboriginal Health

The health status of Aboriginal peoples in the Interior region will be highlighted in a future report that will be developed jointly with Aboriginal partners. In the meantime, this chapter highlights partnership work that exemplifies a population health approach at a systems level and illustrates how cultural safety is foundational to the delivery of high-quality health services for Aboriginal peoples.

What do we see from a population health perspective?

Aboriginal communities are influencing the health-care system by offering diverse understandings of health and wellness that are integrated into IH's system of care. Health and wellness priorities identified by Aboriginal communities are implemented through multiple mechanisms of engagement and shared decision making.

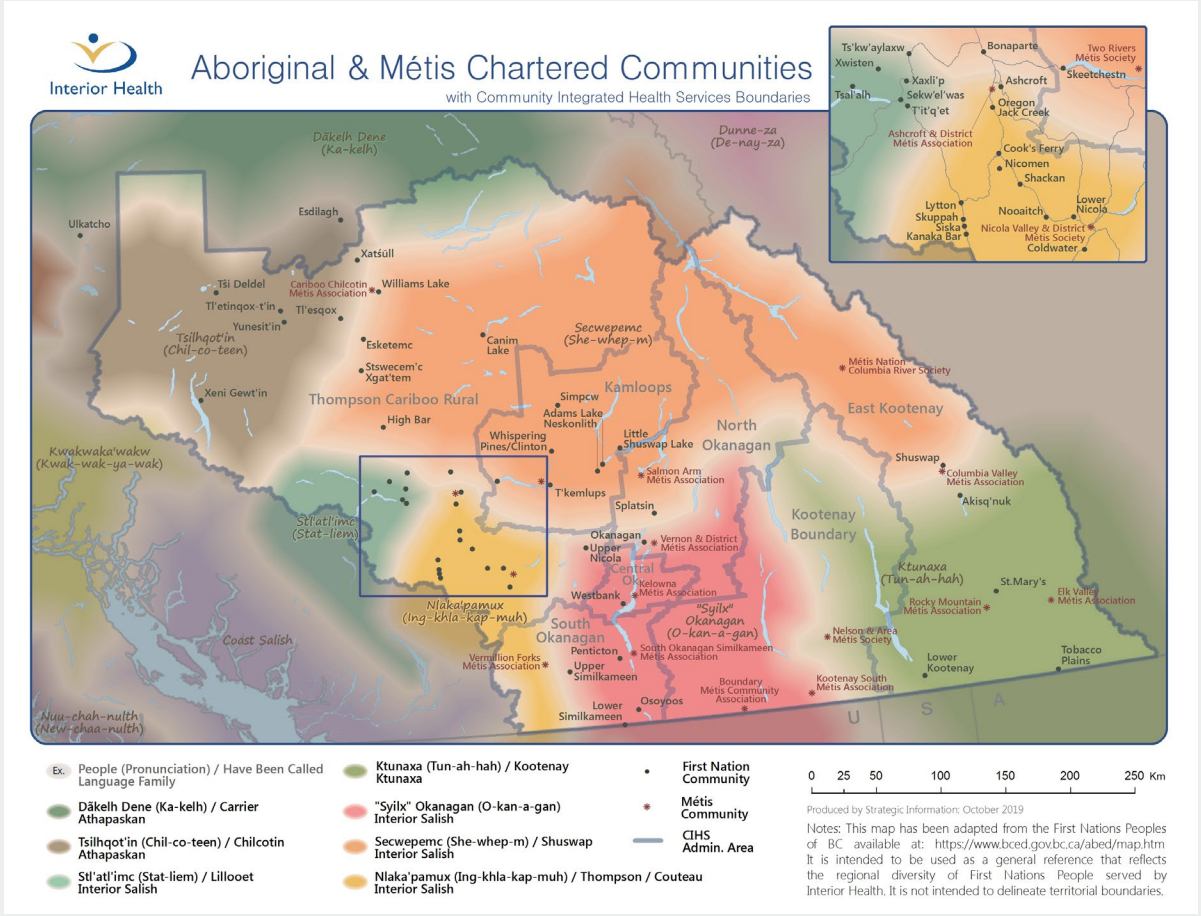
Aboriginal engagement occurs at a community or local level, a Nation level and regionally. At the Nation level, a Letter of Understanding (LOU) is the partnership agreement between an Aboriginal government or service organization partner and IH. This LOU outlines how the partners will work together for the improved health and wellness of Aboriginal communities and their members. IH has LOUs with each of the seven First Nations in the Interior region and the Métis Nation British Columbia. Health status of Aboriginal peoples is improved through the shared design, delivery and evaluation of culturally safe health programs and services.

This partnership structure supports the United Nations Declaration on The Rights of Indigenous Peoples Article 23: **Indigenous peoples have the right to determine and develop priorities and strategies for exercising their right to development**. In particular, Indigenous peoples have the right to be actively involved in developing and determining health, housing, and other economic and social programs affecting them and, as far as possible, to administer such programs through their own institutions.

Health for Everyone, by Everyone: What does a community-led approach to Aboriginal health look like?

IH has distinct relationships with each of the seven diverse Interior Nations and the Métis Nation British Columbia (Figure 19). Each Nation, community, language or cultural group may have a different approach to person, family and community wellness.

Figure 19. Aboriginal and Métis Chartered Communities



Source: IH Strategic Information Management

Community Model of Wellness

The Ktunaxa Nation is an example of one of these populations. To strengthen partnership with the Ktunaxa Nation, and improve service planning and delivery throughout the Ktunaxa Nation, IH and the University of Victoria (UVic) explored the question, Qapsin kiʔin ʔaqaǂxuniyam (What would a healthy community look like?).

The xaɬqanaǂ ʔitkiniǂ (Many Ways of Working Together) project explored the Ktunaxa community model of wellness (Figure 20), and how IH could learn from this model to provide health services in a way that honours Ktunaxa culture, language and worldviews. Partners from the Ktunaxa Nation, UVic and IH were directed and advised by Ktunaxa Elders and Knowledge Holders through the xaɬqanaǂ ʔitkiniǂ Advisory Group.

Aboriginal Cultural Safety

"When I go to the doctor's now, they give me the decision-making power; the doctors ask me questions in a way that I could make the decisions, and that was very encouraging for me ... I have to tell you once more, is that I had the ability to make decisions; to me, it was like a partnership. It was my health, my body, my life."

This insight from a Ktunaxa community member highlights the importance of IH staff having cultural humility. To shift how we engage with and support Aboriginal communities, we need to begin by improving cultural safety at work.

The goal of the Journey to Aboriginal Cultural Safety Program is to ensure that all IH employees are equipped with the knowledge and skills needed to provide culturally safe care, and that all IH services are safe and welcoming for Aboriginal peoples.

A culturally safe approach involves paying attention to the roots of health and health-care inequities, including colonization. Fundamentally, we acknowledge that advancing Aboriginal cultural safety in a meaningful way is not only "hard work", but also "heart work".

Our journey continues as we support ongoing learning related to cultural safety and humility across the organization.

Figure 20. Ktunaxa Community Model of Wellness

Source: xaɬqanaǂ ʔitkiniǂ *(Many Ways of Working Together) project. Shared with permission.*

Practicing Culturally Safe Care

Rod, a young Aboriginal man, suffers serious injuries in the bush and is brought to an emergency department (ED) along with his grandmother, Sandra. In addition to Rod's injuries, the ED is unfamiliar to Rod and Sandra, who are alone due to the great distance from home and family.

While Rod is taken for immediate attention, a nurse gathers information from Sandra. In addition to being worried about Rod's well-being, Sandra appears to be uncomfortable answering some of the intake questions. Having received priority training in cultural safety, the nurse pauses the intake process and asks if there is anything she can do to support Sandra. Sandra indicates that she would feel more comfortable if a translator were present, and the nurse is able to arrange this. The nurse also describes the Aboriginal Patient Navigator (APN) Program, and asks Sandra if it would be okay to connect her with an APN. Sandra agrees.

When the APN arrives, she and Sandra discuss ways to make the intake process and planning of Rod's immediate care more comfortable. As an Elder, Sandra knows that Rod's spiritual care is extremely important to his health and well-being at this time, and, with the APN's support, Sandra carries out a smudging ceremony. Prior to Rod's discharge, the APN communicates with a band nurse in Rod's community and they identify culturally safe services and supports that are closer to Rod and Sandra's home. This ensures that Rod will continue to receive care that is timely, appropriate and culturally relevant, and that Sandra will be supported as she cares for Rod in his recovery.

Recommendation 4:

To support shared decision making between Aboriginal peoples and IH in the planning and delivery of culturally relevant services for Aboriginal populations. Examples include:

- Recognizing and learning from Aboriginal peoples who have much knowledge to share regarding wellness
- Working with Aboriginal people to establish measurable goals to identify and close the gaps in health outcomes between Aboriginal and non-Aboriginal communities, and to report on and assess long-term trends

Surgical Services

More than 59,000 publicly-funded surgical procedures were performed in IH facilities in 2018/19, of which about one quarter were unscheduled (emergency). **A variety of factors is driving the increased demand for surgery across B.C.**, including a growing and aging population, and increasing prevalence of obesity, transport-related injuries and sports-related injuries from a more active sub-population[27]. In response, the B.C. Ministry of Health's Surgical Services Strategy (2018) has focused efforts on improving timely access to scheduled surgeries, improving patient experience and improving surgical outcomes. This chapter considers how a population health approach can support these goals and how surgical services can contribute to population health and wellness.

What do we see from a population health perspective?

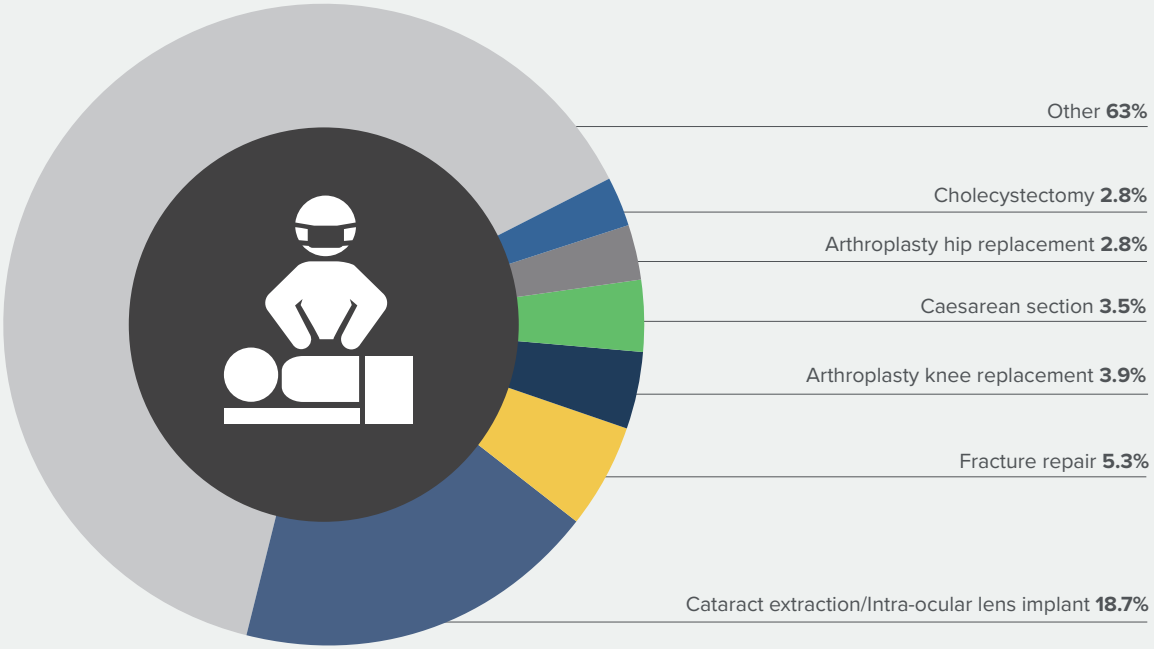
Common Procedures in IH

The top six surgical procedures in IH accounted for nearly 4 out of every 10 surgeries in 2018/19, reflecting the drivers for increased demand for surgery and the targeted priority areas for IH (Figure 21). The removal of cataracts is by far the most common procedure. Most cataracts are age-related[28], so the health and economic burden of cataracts in IH is expected to grow with an aging population.

Fracture Repairs

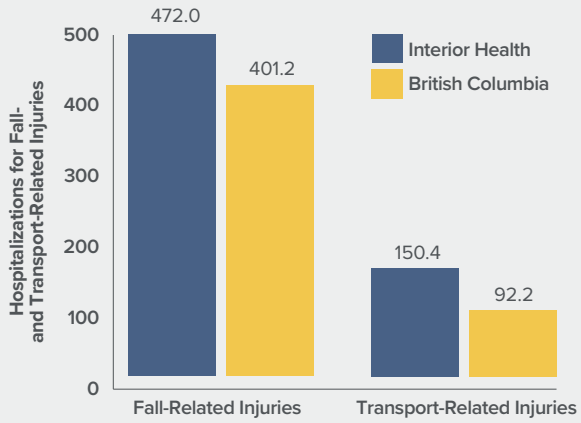
The growing seniors' population is also a driver for surgical repair following fractures. Seniors are at a higher risk of falls, due to multiple factors (e.g. impaired vision, reduced strength and poorer coordination), and a higher risk of fracture, because bones tend to weaken with age (osteoporosis). More than 1 in 5 (23%) seniors over 80 years of age had osteoporosis in 2017, and about 6 per 100 had a fracture relating to osteoporosis. **These rates represent a substantial number of seniors who are at risk of a fracture that needs surgical repair.**

Figure 21. Top Six Surgical Procedures in IH as a Percentage of All Procedures



Source: Surgical Patient Registry Data Mart (provided by IH Strategic Information Management)

Figure 22. Age-Standardized Rates of Hospitalizations for Fall- and Transport-Related Injuries, 2016/17



Source: Discharge Abstract Database (extracted from Injury Data Online Tool)

IH has an older population than B.C., so it would be expected to have more hospitalizations for fall-related injuries. Even when these age differences are accounted for, the rate of hospitalizations for fall-related injuries in IH is significantly higher than the B.C. average (Figure 22). The relative difference between IH and B.C. is even greater for transport-related injuries. These **fall- and transport-related injuries have contributed to the demand for surgical fracture repair in IH.**

Hip and Knee Replacements

Osteoarthritis is one of the most common reasons for hip and knee replacement surgery. About one third (33%) of seniors aged 65-79 in IH had osteoarthritis in 2017, increasing to nearly one half (48%) of the 80+ population. These prevalence rates were both higher than the respective B.C. averages (29% and 44%). Regarding wait times, the percentage of hip and knee replacements completed within 26 weeks of booking has increased steadily since 2015/16. While this encouraging trend reflects IH's targeted efforts, it is important to recognize that demand for hip and knee surgery and other common surgical procedures can be reduced by modifying certain risk factors.

Caesarean Section

While Caesarean section (C-section) rates in areas across IH were similar to the B.C. average (36%), in 2017/18, it is important to recognize that B.C. has the highest rate of any province in Canada (29% average). C-section rates have been increasing in B.C. (27% in 2001/02) and worldwide over the past few decades, with most countries and regions now exceeding the World Health Organization-recommended rate of 15% of all deliveries. C-section rates have increased with no apparent improvement in maternal and neonatal outcomes, which suggests there may be limited medical benefit from this high rate of surgical intervention in birth. There are multiple maternal factors that may contribute to increasing rates of C-section, such as maternal choice, increasing maternal age and higher rates of obesity, diabetes and hypertension. Health promotion and prevention programs, including equitable access to effective prenatal education, can reduce some of these risk factors and contribute to the overarching goal of reducing C-section rates in IH.

Health for Everyone, by Everyone: What can we do using a population health approach?

Prevention and Early Intervention

The risk of onset and progression of arthritis can be lowered by maintaining a healthy weight and quitting smoking[29]. The modifiable risk factors for hip fracture include smoking, alcohol use and poor nutrition[29]. Public health interventions can delay or prevent cataracts by addressing smoking, obesity, long-term sun/UV exposure, diabetes and high blood pressure[30]. Cholecystectomy, to remove the gall bladder, is most often performed to treat gallstones and the complications they cause[31]. The modifiable risk factors for gallstones include obesity, being sedentary, having diabetes, and eating a diet high in fat and cholesterol and low in fibre.

Patient Optimization

As well as increasing the likelihood of surgery, some physical, mental and social conditions (e.g. obesity) can make it more challenging to safely administer anesthesia, and can impact a patient's ability to recover or achieve the best possible outcomes from surgery[32]. Pre-surgical patient optimization is designed to help patients prepare for a scheduled procedure, so they can obtain the most benefit after surgery. Optimization includes support for behavioural risk factors and clinical risk factors, and has a social component (Figure 23).

Wider Influence

Surgical teams have "significant influence over clinical settings and, by extension, institutional policy and practice"[33]. This influence enables surgical teams to champion preventive health interventions and contribute to health at a population level.

Figure 23. Examples of Patient Optimization Components

Source: Surgical Patient Optimization Collaborative

Getting the Best Outcomes from Surgery

Pranay, a truck driver in his mid-50s, is involved in a serious vehicle accident during an early winter snowfall. When paramedics arrive on the scene, Pranay complains of chest pain, and the paramedics rush him to the hospital with a suspected heart attack.

The emergency department physicians address Pranay's immediate heart problems and stabilize him. Weeks later, he is slated for a second surgery to repair a fracture that did not heal properly. In anticipation of this second surgery, Pranay meets with the surgeon to prepare for the operation. The surgeon identifies that Pranay smokes and finds it difficult to make healthy food choices while he is on the road.

To ensure safe surgery and optimal recovery, the surgeon advises Pranay to access B.C.'s Smoking Cessation Program, a free nicotine replacement therapy program; recommends ongoing support from QuitNow.ca; and refers Pranay to a registered dietitian for nutrition counselling.

Recommendation 5:

To prevent and slow the progression of chronic disease and injury that leads to surgery.
Examples include:

- Community-based health promotion and prevention activities, particularly relating to falls and transport-related injuries
- Enhancing coordination between primary care and surgical services to reduce the burden on surgical services and improve surgical outcomes

Workplace Health & Safety

"Good work" improves health and well-being across our lives and protects against social exclusion. Having good work means having a safe and secure job with good working hours and conditions; supportive management; flexibility to manage work, family and personal life; and opportunities for training and development. Conversely, being out of work is associated with poor health and well-being[34].

The workplace is a key setting for improving and maintaining the health and well-being of the working-age population. Workplaces can also help individuals with long-term health conditions (including poor mental health), musculoskeletal conditions and disabilities to gain and retain good work. Employers benefit from a healthy and happy workforce through increased employee retention and productivity, reduced absenteeism, and fewer injury claims. This chapter explores employee health and wellness in the Interior region, and the opportunities to support this distinct population.

What do we see from a population health perspective?

Economic Development Regions

There are seven economic regions within B.C., of which three are located in the Interior. Each Interior economic region is distinct in terms of its population and employment opportunities[35] (Figure 24). The unemployment rate in all three regions has been consistently higher than the provincial rate (5.1% in 2017). Overall, employment income in areas across IH is slightly lower than the B.C. average (2016 Census). **Employment income significantly affects the quality and availability of many health-influencing factors,** such as good food, education, shelter and health services. Lower income and social status may result in less control over life circumstances and discretion to act, which also influences peoples' health[36].

The predominant employment industries in each region are likely to present different risks to employee health and safety, and to be impacted differently by external factors. For example, all three regions are heavily dependent on natural resources, so they will be particularly sensitive to changes in the climate and natural resource economy. Health care and social assistance is one of the largest industries across the Interior and will be impacted by an aging and growing population of patients.

Figure 24. Key Facts about Work in the Interior Economic Regions, 2017

CARIBOO	KOOTENAY	THOMPSON-OKANAGAN

+ Key cities including Williams Lake, Quesnel, 100 Mile House, Prince George, McBride
+ Unemployment rate of 7.4%. Full-time employment rate of 80%
+ One of the **less-populated** regions in B.C.
+ Largest industries (% of jobs):
  + **Health care and social assistance** (14%)
  + Retail trade (13%)
  + Manufacturing (11%)
  + Construction (8%)
+ Large share of B.C.'s jobs in **forestry and logging** with support activities (17%) located in this region
	+ Key cities including Nelson, Castlegar, Slocan, Creston, Fernie, Cranbrook, Kimberly, Trail, Rossland
	+ Unemployment rate of 7.3%. Full-time employment rate of 75%
	+ **Highest median age** (46.9 years) of all economic regions in B.C.
	+ Largest industries (% of jobs):
	  + **Retail trade** (13%)
	  + Health care and social assistance (11%)
	  + Construction (9%)
	  + Mining and oil/gas extraction (9%)
	+ Large share of B.C.'s jobs in **mining and oil/gas extraction** (24%) located in this region
		+ Key cities including Merritt, Ashcroft, Kamloops, Oliver, Osoyoos, Kelowna, Vernon, Golden, Revelstoke
		+ Unemployment rate of 7.1%. Full-time employment rate of 76%
		+ The **third most populated** region in B.C.
		+ Just over 65% of population was of working age (15–64 years), the **lowest share** in B.C.
		+ **Median age** (46.4 years) **significantly higher** than B.C. (40.6 years)
		+ Largest industries (% of jobs):
		  + **Health care and social assistance** (14%)
		  + Retail trade (12%)
		  + Construction (11%)
		  + Accommodation and food (9%)
		+ Large share of B.C.'s jobs in **forestry and logging** (23%), **mining and oil/gas extraction** (22%), and **agriculture** and **fishing** (21%) located in this region

Source: WorkBC

Employee Health and Wellness

23,470

Number of injuries reported to WorkSafeBC that led to loss of work time, across all industries located in the Interior regional districts, from 2016 to 2018

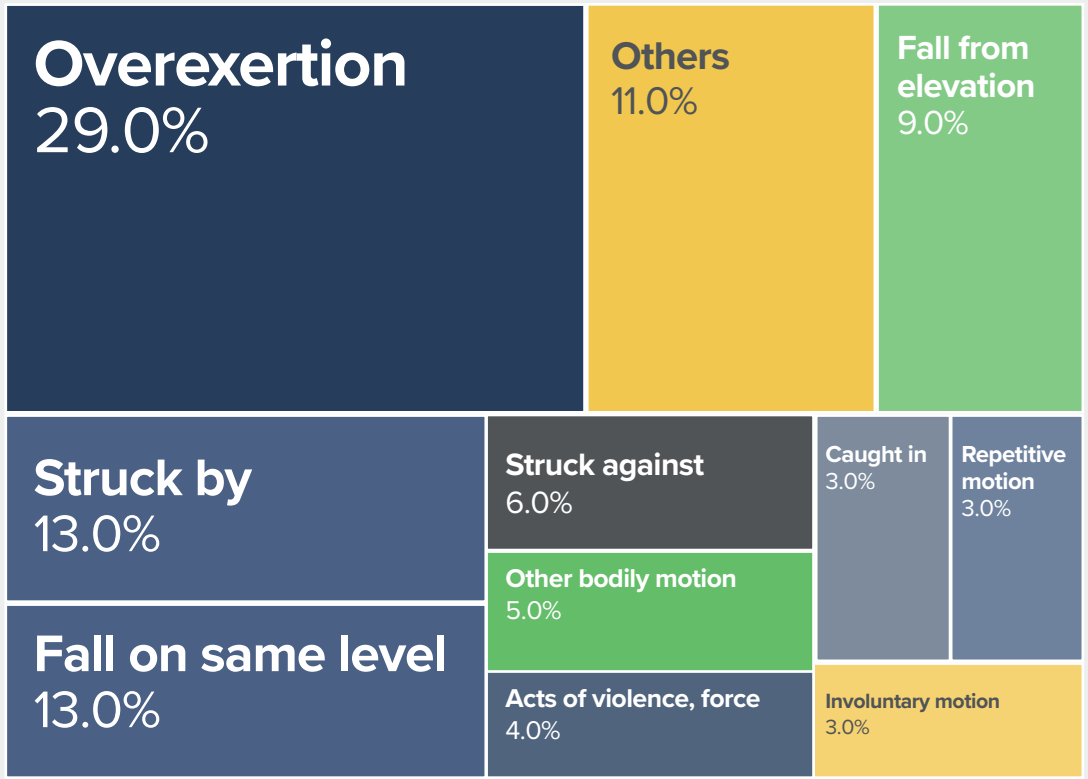
"Experiencing stress for long periods can impact our health and safety."

"A culture of health and safety in the workplace also has the potential to permeate families, communities and society as a whole."

About one quarter (24%) of injuries were among employees aged 45 to 54 years, and about 6 out of 10 (58%) injuries were among males. The service sector had the largest share of injuries (49%), followed by construction (14%) and manufacturing (12%). Across all industries, the top causes of injury were overexertion, being struck by or against objects, and falls (Figure 25). The consequence of overexertion is usually a musculoskeletal injury: damage to the soft tissues of the body that is often cumulative in nature. Falls from elevation, which are more likely to result in critical injury, were notably higher (18%) in the construction industry. Injuries from being caught in an object, were notably higher (9%) in the manufacturing industry.

These WorkSafeBC claims do not take into account incidents that go unreported or do not lead to time off work, nor do they account for the wider social and economic impacts of work-related injury and death.

Figure 25. Time-Loss Injuries for All Industries in the Interior Regional Districts by Accident Type, 2016 to 2018



Source: WorkSafeBC

Costs of Illness and Injury

Psychological health and safety is an important health component that is not well captured in workplace data. Experiencing stress for long periods, including low-level, constant stressors at work, can negatively impact our health and safety[37]. Common effects can be physical (e.g. headaches, muscle pain and digestive issues), mental (e.g. lack of sleep, mood swings and difficulty thinking) and social (e.g. withdrawal and conflict). Stress can contribute to health and safety incidents and, in the long term, has been associated with health conditions, such as heart disease, high blood pressure, obesity, depression and weakened immunity.

Health for Everyone, by Everyone: What can we do using a population health approach?

Health and Safety Culture

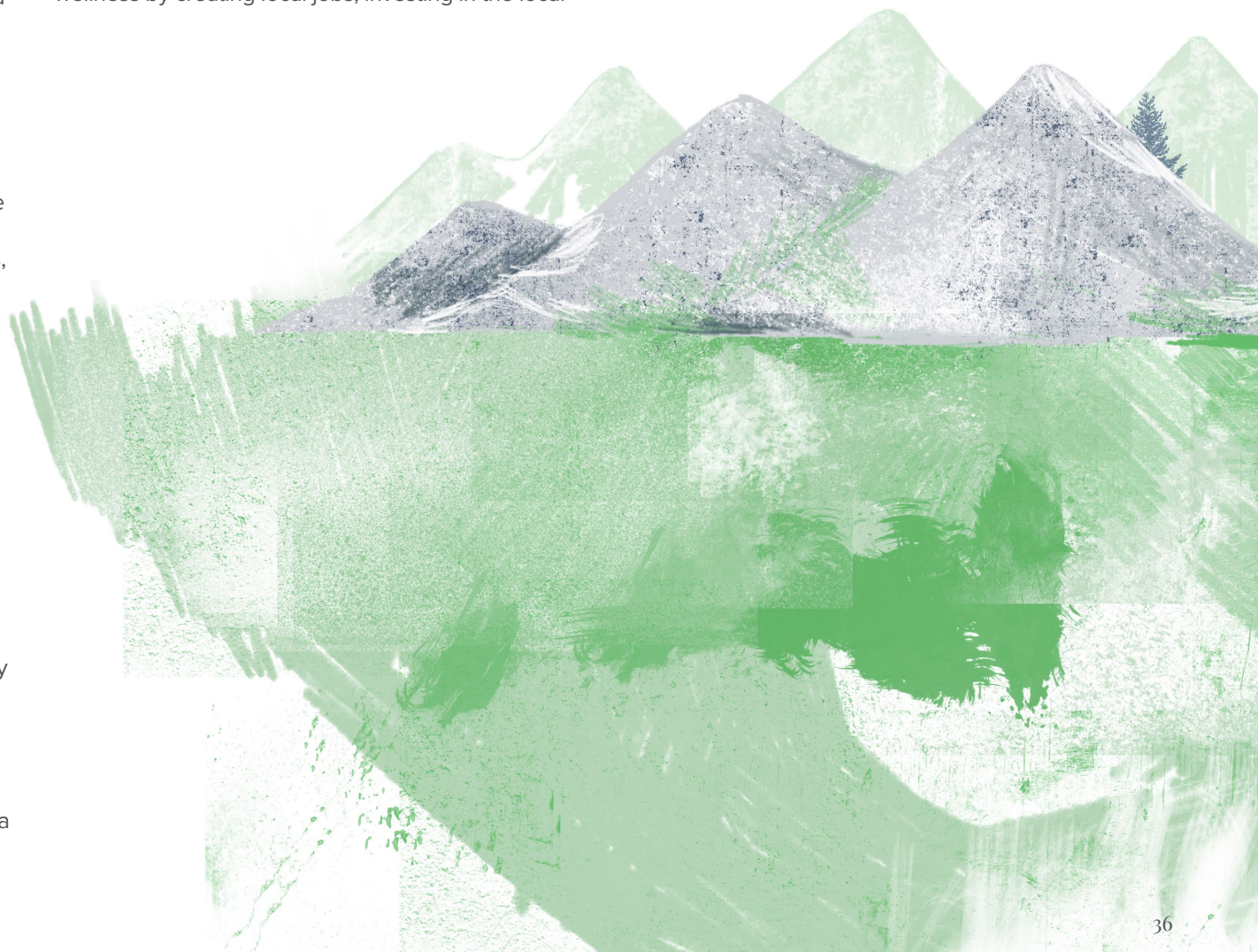
Employers have a duty of care for the health and safety of their employees, and there is good evidence that a comprehensive workplace health & safety program has a positive impact on WorkSafeBC claims, productivity, short-term sickness, long-term disability and associated backfill.

A comprehensive program uses a range of strategies, initiatives and policies to improve the work environment (physical, psychosocial, organizational and economic), and increase the personal empowerment and growth of employees. For example, IH has adopted a proactive and systematic approach to safety—Healthier, Safer IH—that has leadership commitment at the centre, and a safe and healthy workplace identified as a key organizational strategy. By looking at safety in a systematic way (i.e. identifying hazards, with clear and actionable mitigating strategies) IH aims to greatly reduce injuries and begin embedding a culture of safety into everyday work. IH also recognizes that healthier and safer employees result in improved outcomes of quality care.

Health promotion and prevention in the workplace is a complementary strategy that can further reduce rates of sickness, absenteeism and work-related disability. For example, immunization is important for protecting employees and patients from vaccine-preventable diseases and maintaining the continuity of health-care services. Programs that build psychological and physical resiliency can help to prevent illness and injury, and support recovery and return to work.

According to Canada's National Centre for Occupational Health and Safety, Canadian workplace health promotion programs bring cost-benefits of three times return for every dollar invested[38].

At a population level, employers impact health and wellness by creating local jobs, investing in the local economy, and helping people to access the social and economic benefits of employment. A culture of health and safety in the workplace also has the potential to permeate families, communities and society as a whole.



Creating a Healthy and Safe Culture

Gillian is a 45-year-old long-term care attendant based in the community. She is in good physical health, and enjoys an active life and a healthy diet. She is proud of the work she does to help others.

Recently, however, work has been more stressful than usual. In particular, there have been some incidents involving patients acting aggressively. While these have not directly involved Gillian, she is concerned for these patients, her coworkers and herself.

One of Gillian's coworkers sees that the added stress is affecting Gillian's mood and recommends the resources available through the employee and family assistance program. Gillian also talks to her supervisor, who suggests discussing how she feels with the team at the next health and safety huddle. She also reminds Gillian of the community health program that Gillian and her coworkers organized the previous summer. Gillian is excited to get back to these activities with the support of her team.

Recommendation 6:

To enhance health promotion and prevention within a comprehensive workplace health & safety program. Examples include:

- Employers assessing the health and wellness of employees to inform the planning and delivery of health promotion and prevention activities
- Employers identifying opportunities to improve and maintain the physical and psychological resiliency of employees

Health Promotion, Prevention, and Equity Support Personal and Community Health and Wellness

This report provides a broad perspective on the health and wellness of people in IH, and on the many areas of work that contribute to IH's key strategies.

As annual health-care spending continues to increase, it is important to recognize that some illness and injury can be avoided by addressing common modifiable risk factors through health promotion and prevention activities. A system-wide approach that recognizes and promotes health equity ensures that everyone is able to reach their full health potential. While clinical care services are IH's core business, there are many other opportunities for IH to collaborate with partners to create the social, economic and environmental conditions that improve and protect everyone's health and wellness.

We invite you to join us as we explore these opportunities and take these important steps forward toward Health for Everyone, by Everyone.

Recommendation 7:

To develop a collaborative plan that enhances and integrates health promotion, prevention and health equity across IH

Recommendation 8:

To create a population health and wellness dashboard to track improvements in health status, health determinants and health equity

Specific examples of how a population health approach is being applied to IH's key strategies are included in Appendix B.

References

1. World Health Organization. 1946. Constitution. Retrieved from https://www.who.int/about/who-we-are/constitution

2. British Columbia Medical Association. 2010. Partners in Prevention. Implementing a Lifetime Prevention Plan. Retrieved from https://www.doctorsofbc.ca/policy-papers/prevention-health-promotion/partners-prevention-implementing-lifetime-prevention-plan

3. Public Health Agency of Canada. Population Health Approach: The Organizing Framework. Retrieved from https://cbpp-pcpe.phac-aspc.gc.ca/population-health-approach-organizing-framework/

4. World Health Organization. 2016. What is Health Promotion? Online Q&A. Retrieved from https://www.who.int/features/qa/health-promotion/en/

5. World Health Organization. 1986. The Ottawa Charter for Health Promotion. Retrieved from https://www.who.int/healthpromotion/conferences/previous/ottawa/en/

6. Ministry of Health. 2005. A Framework for Core Functions In Public Health. Resource Document. Retrieved from https://www.health.gov.bc.ca/library/publications/year/2005/core_functions.pdf

7. National Collaborating Centre for Determinants of Health. Glossary of Essential Health Equity Terms. Retrieved from http://nccdh.ca/resources/glossary/

8. Whitehead M, Dahlgren G. 2006. Retrieved from http://apps.who.int/iris/bitstream/10665/107790/1/E89383.pdf

9. Social determinants of health and health inequalities. 2019. Government of Canada. Retrieved from https://www.canada.ca/en/public-health/services/health-promotion/population-health/what-determines-health.html

10. World Health Organization. Primary health care. Retrieved from https://www.who.int/news-room/fact-sheets/detail/primary-health-care

11. Public Health Agency of Canada. 2013. Preventing Chronic Disease Strategic Plan 2013-2016. Retrieved from http://publications.gc.ca/collections/collection_2014/aspc-phac/HP35-39-2013-eng.pdf

12. Public Health Agency of Canada. Chronic Disease Risk Factors. Retrieved from https://www.canada.ca/en/public-health/services/chronic-diseases/chronic-disease-risk-factors.html

13. BC Cancer. 2016. Lung. Retrieved from http://www.bccancer.bc.ca/health-info/types-of-cancer/lung/lung

14. Government of Canada. 2012. Cross-Canada Survey of Radon Concentrations in Homes - Final Report. Retrieved from https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/radiation/cross-canada-survey-radon-concentrations-homes-final-report-health-canada-2012.html

15. Conference of Radiation Control Program Directors Inc. 2018. Reducing the Risk from Radon: Information and Interventions. A Guide for Health Care Providers. Retrieved from http://www.radonleaders.org/sites/default/files/HealthCareProfessionalsGuide_Radon_2018_FINAL_CRCPD%20E-18-2.pdf

16. Government of B.C. Lifetime Prevention Schedule. Retrieved from https://www2.gov.bc.ca/gov/content/health/about-bc-s-health-care-system/health-priorities/lifetime-prevention

17. Canadian Mental Health Association. 2008. Mental Health Promotion: A Framework for Action. Retrieved from https://cmha.ca/documents/mental-health-promotion-a-framework-for-action

18. McLellan, A.T. 2017. Substance Misuse and Substance use Disorders: Why do they Matter in Healthcare? Trans Am Clin Climatol Assoc. 2017; 128: 112–130. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5525418/

19. BC Coroners Service. Suicide Deaths in BC 2007-2017. Retrieved from https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/statistical/suicide.pdf

20. Human Early Learning Partnership. Vulnerability on the EDI [fact sheet]. Vancouver, BC: University of British Columbia; [cited 2017 Mar 24]. Retrieved from http://earlylearning.ubc.ca/media/factsheet_edi_vulnerability_20191028-web.pdf

21. Balance and Connection in BC: The health and well-being of our youth. Vancouver, BC: McCreary Centre Society. Retrieved from https://www.mcs.bc.ca/about_bcahs

22. Canadian Mental Health Association. 2018. Mental Health in the Balance. Ending the Health Care Disparity. Retrieved from https://cmha.ca/wp-content/uploads/2018/09/CMHA-Parity-Paper-Full-Report-EN.pdf

23. Canadian Mental Health Association. 2008. Mental Health Promotion: A Framework for Action. Retrieved from https://cmha.ca/documents/mental-health-promotion-a-framework-for-action

24. World Health Organization. What is Healthy Ageing? Retrieved from https://www.who.int/ageing/healthy-ageing/en/

25. Community Care and Assisted Living Act. 2002. Retrieved from http://www.bclaws.ca/civix/document/id/complete/statreg/02075_01

26. BC Centre for Disease Control. Influenza. Retrieved from http://www.bccdc.ca/health-info/diseases-conditions/influenza

27. Ministry of Health. 2015. Future Directions for Surgical Services in British Columbia. Retrieved from https://www.health.gov.bc.ca/library/publications/year/2015/surgical-services-policy-paper.pdf

28. Keay L, Lindsley K, Tielsch J, Katz J and Schein O. 2019. Routine preoperative medical testing for cataract surgery. Retrieved from Cochrane database https://www.cochrane.org/CD007293/EYES_routine-preoperative-medical-testing-cataract-surgery

29. Centers for Disease Control and Prevention. 2019. Arthritis. Risk Factors. Retrieved from https://www.cdc.gov/arthritis/basics/risk-factors.htm

30. Bickol N. Mukesh, PhD; Anhchuong Le, MBBS, GDEB; Peter N. Dimitrov, BOrth; et al. 2006. Development of Cataract and Associated Risk Factors The Visual Impairment Project. Arch Ophthalmol. 2006;124(1):79-85. doi:10.1001/archopht.124.1.79. Retrieved from https://jamanetwork.com/journals/jamaophthalmology/fullarticle/417455

31. Mayo Clinic. Cholecystectomy (gallbladder removal). Retrieved from https://www.mayoclinic.org/tests-procedures/cholecystectomy/about/pac-20384818

32. American Society of Anesthesiologists. Preparing for Surgery: Risks. Retrieved from https://www.asahq.org/whensecondscount/preparing-for-surgery/risks/

33. Barrett S, Begg S, and Kingsley M. 2018. Surgeons and preventative health: protocol for a mixed methods study of current practice, beliefs and attitudes influencing health promotion activities amongst public hospital surgeons. BMC Health Serv Res. 2018; 18: 780. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6192294/

34. Public Health England. 2019. Health matters: health and work. Retrieved from https://www.gov.uk/government/publications/health-matters-health-and-work/health-matters-health-and-work

35. WorkBC. 2019. B.C. & Regional Profiles. Retrieved from https://www.workbc.ca/Labour-Market-Industry/Regional-Profiles.aspx

36. Health Officers Council of BC. 2008. Health Inequities in British Columbia. Discussion Paper. Retrieved from https://healthofficerscouncil.files.wordpress.com/2012/12/hoc-health-inequities-in-bc-final-nov-18-08.pdf

37. Canadian Centre for Occupational Health and Safety. Workplace Stress – General (Fact Sheet). Retrieved from https://www.ccohs.ca/oshanswers/psychosocial/stress.html

38. Canadian Centre for Occupational Health and Safety. Retrieved from https://www.ccohs.ca/topics/wellness/promotion/

Appendix A. Integrated Approach to Health Promotion, Prevention and Equity

Policy Context

Over recent years, Ministry of Health (MoH) mandates and large system strategies have established long-term health promotion, and illness and injury prevention, as priorities for improving the overall health of populations, reducing the unsustainable growth of health-care costs, and helping to create sustainable health systems and economies for the future[1,2]. In particular, the Lifetime Prevention Schedule (2018)[3] establishes the health system's priorities for clinical prevention, and B.C.'s Guiding Framework for Public Health (2017)[4] provides a broader perspective on population and public health prevention. Together, these frameworks describe the broad scope of prevention within the health system that includes, but is not limited to, the delivery of prevention services and initiatives.

B.C.'s Guiding Framework for Public Health (GFPH)

The GFPH (right) identifies seven visionary goals for the public health system, all underpinned by health assessment and surveillance.

Lifetime Prevention Schedule (LPS)

The LSP defines clinical prevention services as:

"Manoeuvres pertaining to primary and early secondary prevention (i.e. immunization, screening, counselling and preventive medication) offered to the general population (asymptomatic) based on age, sex, and risk factors for disease, and delivered on a one-provider-to-one-client basis"[5].

Source: B.C.'s Guiding Framework for Public Health, Ministry of Health

Continuum of Prevention

Within this context, the **health and wellness of the population and health equity** are defined as the end goals of the health system. **Health promotion** and **prevention** are the means for achieving these goals.

Prevention is typically recognized as having levels of intervention along a continuum from preventing the "causes of the causes" of disease and disability to preventing the over-medicalization of health and wellness[6]. These levels are defined below and aligned with the continuum of care.

LEVEL	DEFINITIONS	CARE CONTINUUM
Primordial	Preventing the emergence of predisposing social and environmental conditions that can lead to causation of disease and disability	Staying healthy
Primary	Protection of health by personal and communal efforts	Staying healthy
Secondary	A set of measures available to individuals and communities for early detection and prompt intervention to control disease and minimize disability	Getting better/Living with illness
Tertiary	Measures aimed at softening the impact of long-term disease and disability by eliminating or reducing impairment, disability and handicap; minimizing suffering; and maximizing potential years of useful life	Living with illness
Quaternary	Action taken to identify patients at risk of over-medication and to protect them from new medical interventions	Living with illness/ Coping with end of life

Current State

Based on a review of Vice President (VP) Work Plans and consultation with VP portfolio leads, the following high level summary describes the broad range of preventive health interventions currently underway across Interior Health (IH).

VP Portfolios

- Population Health
- Clinical Operations
- Clinical Support Services
- Research & Planning (Strategic Information)
- Communications and Culture
- Human Resources (Workplace Health & Safety)
- Support Services
- Medicine & Quality
- Cross-Cutting

HEALTH PROMOTION, PREVENTION AND HEALTH EQUITY

PRIMORDIAL Preventing emergence of risk factors	PRIMARY Preventing exposure to risk factors	SECONDARY Preventing disease progression	TERTIARY Preventing crises, disability and suffering	QUATERNARY Preventing over-medicalization
+ Tobacco and vaping control (e.g. smoke-free environments) + Healthy community planning (e.g. safe and active travel, housing, heat alert response) + Food security and healthy food environments (e.g. local procurement, informed dining) + Food sovereignty and access to traditional foods + Environmental public health (e.g. food safety and drinking water protection) + Community care facility licensing + Community-based injury prevention (e.g. seniors and transport-related falls)	+ Prenatal/postpartum education + Breastfeeding promotion + Immunization (including children, seniors and staff) operations and specialist support + Substance use prevention (e.g. Preventure drug and alcohol prevention in schools) + Smoking cessation (e.g. nicotine replacement therapy in hospital) + Identification and brief advice for smoking, healthy weight and alcohol + Injury prevention (e.g. falls prevention in hospital and long-term care, safe kids week in community) + Infection/outbreak prevention (hospital and community e.g. canine scent detection program) + Anti-microbial stewardship + Dental health promotion	+ Perinatal depression screening + Hearing loss screening and growth monitoring + Nurse-Family Partnership (NFP) + Coordinated access to primary care for priority populations (e.g. Outreach Urban Health) + Cancer screening (cervical, breast, colorectal) + Screening and early intervention for cardiovascular disease (e.g. lipid testing), hypertension, diabetes + Infection/outbreak control (hospital and community)	+ Chronic disease management (including self-management and First Nations Elder Care Enhancement) + Physical rehabilitation (e.g. vascular improvement and community-based programs) + Early psychosis intervention + Psycho-social rehabilitation for mental health and substance use + Virtual care outreach/ home health monitoring (e.g. heart failure, COPD) + Home health case management (including outreach on First Nations reserves)	+ Medicine reconciliation + Talking therapies for anxiety and depression + Behavioural support to reduce inappropriate antipsychotic use + End-of-life planning (e.g. palliative care approach in long-term care facilities, medical assistance in dying, Aboriginal palliative care) + Opioid alternatives for chronic non-cancer pain
+ Climate change awareness, vulnerability assessment and adaptation + Greenhouse gas reduction and carbon neutral action (e.g. plant upgrades and carbon alternatives) + Energy and environmental design standards for new capital builds + Waste reduction initiatives (e.g. recycling and food choices) + Environmental safety (e.g. environmental testing at IH facilities)	+ Violence prevention and work-alone safety programs + Musculoskeletal injury prevention (clinical care and materials handling) + Preventing harm from cytotoxic/hazardous drugs and other hazards (e.g. fit testing)			

HEALTH PROMOTION, PREVENTION AND HEALTH EQUITY				
PRIMORDIAL Preventing emergence of risk factors	**PRIMARY** Preventing exposure to risk factors	**SECONDARY** Preventing disease progression	**TERTIARY** Preventing crises, disability and suffering	**QUATERNARY** Preventing over-medicalization
+ Health safety management system/ safety culture (including psychological safety) + Health-equity enhancing Community Health Centres (primary care and health determinants)	+ Healthy Start Initiative (e.g. Healthy from the Start Program) + School health promotion (e.g. medical alert staff training, health promoting schools coordination) + Youth sexual health clinics + Response to environmental hazards + Harm reduction initiatives (e.g. needle exchange, condom distribution) + Environmental management and emergency response + Family health and parenting support (other than NFP; e.g. home visiting, parenting groups, social-emotional development) + Strategies to promote physical activity + Staff and physician health and wellness culture	+ Human Immuno-deficiency Virus (HIV) testing, and treatment as prevention	+ Overdose prevention and response (including Aboriginal-specific opiate agonist therapy) + Diabetic foot care + Pre-surgical patient optimization (e.g. smoking cessation, glucose control, social supports)	

CROSS-CUTTING ENABLERS (WITH EXAMPLES)	
Epidemiology & Surveillance	**Outbreak detection, local health profiles, equity impact assessment**
Research & Planning	**Data management and analytics, program evaluation, Aboriginal self-identification, evidence-informed planning**
Clinical Support Systems	**Clinical information and referral management systems, virtual care technology**
Engagement & Communications	**Involvement of Aboriginal partners, public engagement, digital communications, social media**
Public Health Advocacy	**Expert advice and consultation to influence service planning and public policy (e.g. housing, poverty reduction)**
Collaboration & Coordination	**Clinical networks, team-based care, physician-administrator dyads, provincial partnerships**
Education & Training	**Aboriginal cultural safety education**
Quality & Patient Safety (including Health Equity)	**Culturally appropriate, trauma-informed, safe and inclusive spaces** **Systems approach to recognizing and promoting health equity to improve access and outcomes for all**

Future State

As per Recommendation 7 of the main report, the future state will be defined in a collaborative plan that enhances and integrates health promotion, prevention and health equity across IH.

References

1. *Ministry of Health. 2009-2013. Innovation and Change Agenda. Retrieved from http://docs.openinfo.gov.bc.ca/d30170613a_response_package_hth-2012-00165.pdf*

2. *Ministry of Health. 2014. Setting Priorities for the B.C. Health System. Retrieved from https://www.health.gov.bc.ca/library/publications/year/2014/Setting-priorities-BC-Health-Feb14.pdf*

3. *Ministry of Health. 2018. Lifetime Prevention Schedule Practice. Retrieved from https://www2.gov.bc.ca/gov/content/health/about-bc-s-health-care-system/health-priorities/lifetime-prevention*

4. *Ministry of Health. 2017. B.C.'s Guiding Framework for Public Health. Promote, Protect, Prevent: Our Health Begins Here. Retrieved from https://www.health.gov.bc.ca/library/publications/year/2017/BC-guiding-framework-for-public-health-2017-update.pdf*

5. *The Lifetime Prevention Schedule. 2018. Establishing Priorities among Effective Clinical Prevention Services in British Columbia. Summary and Technical Report. March 2018 Update. Retrieved from https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/health-priorites/lifetime-prevention-schedule/lps-report-2018.pdf*

6. *British Columbia Medical Association. 2010. Partners in Prevention. Implementing a Lifetime Prevention Plan. Retrieved from https://www.doctorsofbc.ca/policy-papers/prevention-health-promotion/partners-prevention-implementing-lifetime-prevention-plan*

Appendix B. Examples of How a Population Health Approach Is Being Applied in Interior Health (IH)

Primary & Community Care

- Collaborating with local governments to enhance smoke-free bylaws that control litter, promote positive role modelling for youth, decrease opportunities to smoke and reduce second-hand smoke exposure. These benefits also apply to vaping and non-medicinal cannabis use in public places.
- Supporting the District of Sicamous with its economic development strategy that has community wellness at its core, including spaces for recreation and community connection and a healing centre providing space for health care
- Providing culturally appropriate, trauma-informed care for patients facing mental health and substance use challenges, including through the Cedar Sage Health and Wellness Clinic and the Outreach Urban Health Clinic in Kelowna
- Reviewing childhood immunization coverage, services and best practices to inform public health operations; offering full immunization catch-up to selected grades in schools; and planning to implement statutory vaccine status reporting
- Collaborating with primary care physicians on an initiative to screen and treat patients with alcohol use disorders
- Bringing together primary and community care services and the Seniors Health and Wellness Centre in Kamloops to provide integrated, team-based health and social care for older patients
- Supporting local governments with provincially required housing needs assessments and housing needs reports that address housing affordability, attainability, location and quality

Mental Health & Substance Use

- Supporting uptake of the school-based Preventure program across the IH region, an evidence-based drug and alcohol prevention program targeting four personality risk factors for youth substance misuse through staff training, screening for substance use risk and facilitated group workshops
- Consulting with people with lived experience of substance use to ensure that IH services are delivered in a non-judgmental, culturally appropriate, safe and effective manner, where and when people need them
- Collaborating with partners to establish Foundry Centres in Kelowna, Kamloops and Penticton, the “one-stop shops” that bring together existing core health and social services, and provide a place where young people 12 to 24 years of age can find the care, connection and support they need, both online and in the community
- Establishing Youth Intensive Case Management (YICM) services in Kelowna and Kamloops that provide community outreach and deliver interventions that address the interconnection between biology, psychology and socio-environmental factors
- Recognizing stigma as a barrier to individuals accessing care at IH; raising awareness of stigmatizing language, attitudes and behaviours, including through online media; and developing resources to support IH staff and physicians
- Adapting internal IH policies impacted by the legalization of non-medicinal cannabis, and providing public information that supports informed choice and collaborating with local governments on community-based action, including smoke free bylaws
- Enrolling families in Nurse-Family Partnership, a free, evidence-based public health program for young women having their first baby, continuing until their child reaches two years of age. Health, social and economic supports include having a healthy pregnancy, building a strong support network, planning for housing, continuing education and skill development, and accessing community resources.

Seniors Care

- Collaborating with primary care physicians to provide palliative and end-of-life care consultation through leadership and facilitation at weekly Whole Community Palliative Rounds. Inter-professional and expanded Circle of Care teams provide rapid clinical problem solving and care management support.
- Preventing falls and supporting independent living by identifying and addressing the behavioural, biological, socioeconomic and environmental risk factors for falls, including through the SAIL (Strategies and Actions for Independent Living) HomeActivity Program to improve strength, balance and endurance
- Shifting the principles of palliative care upstream with a new palliative approach that involves the early identification and treatment of pain and symptoms; medication management; and addressing psychosocial needs and associated problems
- In partnership with First Nations, supporting improved service delivery and, closer to home, culturally responsive care for Elders with chronic medical conditions and/or frailty
- Publishing information online about all licensed care providers, and those found in contravention of the CCLA, to assist families in making informed decisions about where to access care

- Supporting local governments to complete and implement community age-friendly plans, and include age-friendly recommendations within official community plans, master recreation plans and housing strategies; assisting municipalities, regional districts and First Nations communities to access provincial, age-friendly funding; and providing specialist advice, facilitation, data and interpretation

Aboriginal Health

- Strengthening relationships and shared decision making with Aboriginal partners to support the self-determination of Aboriginal people and improve health equity
- Investing in the expansion of the Aboriginal Cultural Safety Education team to increase cultural safety education opportunities and improve organizational cultural competency
- Collaborating with Elders and Knowledge Keepers to improve access to traditional foods at Deni House in Williams Lake for improved wellness and culturally relevant care for Aboriginal clients
- Creating an emergency management procedure through the South Okanagan Aboriginal Services Committee to ease transitions in care for home health or mental health clients during an emergency
- Expanding the Aboriginal Patient Navigator Program to include a new position at the Shuswap Lake Hospital in Salmon Arm
- Developing engagement frameworks for Métis and urban/"away from home" Aboriginal partners to support addressing the unique cultural and wellness needs of Aboriginal patients and clients
- Supporting community-led research to identify the needs of the diverse Aboriginal populations within the Interior and create processes for the results to influence the health-care system
- Dedicating a future health status report to the health status of Aboriginal peoples, and using a strengths-based approach to discuss Aboriginal wellness

Surgical Services

- Providing support and resources for IH hospital sites to implement smoke-free environment policies that protect staff and patients from second-hand smoke
- Piloting a structure for registered nurses and registered psychiatric nurses to order nicotine replacement therapy (NRT) in a hospital setting for patients who smoke
- Creating inter-faith sacred spaces that allow for traditional, sacred cultural and healing practices, and offering traditional and tradition-inspired food options to clients
- Creating healthy environments that provide opportunities for physical activity and delivering physical rehabilitation in community settings
- Keeping patients engaged and informed during their surgical journey by implementing the Patient Notification and Point of Contact Initiative at six hospitals (Kelowna, Kamloops, Vernon, Penticton, Cranbrook and Trail)
- Improving the integration and coordination of surgical care pathways with patients at the centre, through hip and knee replacement programs in Kelowna, Kamloops, Penticton and Vernon
- Implementing the Enhanced Recovery After Surgery Program for colorectal surgery, including nutrition and early mobilization, to improve patient experience, reduce length of stay in hospital and prevent complications
- Collaborating through the Rural Surgical Obstetrical Network to support and enhance surgical and obstetrical care, with a focus on equitable access to high-quality, sustainable services in rural and remote areas

Workplace Health & Safety

- Developing policies to create smoke-free and healthy food environments in IH facilities, and safe spaces for new moms to continue breastfeeding
- Providing access to employee and family assistance programs, and resources for psychologically healthy and safe huddles
- Protecting employees from indoor air quality issues (e.g. exposure to radon gas and smoke from wildfires) through environmental testing and services
- Promoting safe and active travel through local initiatives (e.g. Bike to Work Week), facilities (e.g. changing and bike storage) and collaboration (e.g. with local governments on community planning)
- Putting the “H” back into WHS (Workplace Health & Safety) with regular team stretches for staff based at the Kelowna Community Health and Services Centre
- Providing job-specific immunization and training to protect staff and patients from communicable diseases
- Recruiting a workforce that represents patients and communities, with a specific target to recruit Aboriginal employees (10% by 2025)

Interior Health

Every person matters