



Module 1

What is Public Health?

Objective

Upon completion of Module 1, participants will understand:

- › What public health is and why it is important, including the goals and values within a Canadian and BC context.
- › The key accomplishments in the history of public health in Canada.
- › Where public health fits within the health system.

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Ministry of
Health

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Definitions

Health and Well-being

There is near universal agreement that “health” and “well-being” are important components of the human condition and that “good health” is a condition humans collectively value. But what defines health and well-being and what is the role of the public health system in achieving these are not always clear.

In 1948 the World Health Organization defined health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”¹ This definition was the first to include the sense of well-being, the prevalence of positive attributes as a condition of health.

Systematic activities to prevent or cure health problems and promote good health in humans are undertaken by organized health systems. Health systems, also referred to as health care systems, are the organization of people, institutions and resources to deliver health services to meet the health needs of target populations. The primary purposes of health systems are to promote, restore or maintain health.

Public Health

Public health has been described as:

An organized activity of society to promote, protect, improve, and when necessary, restore the health of individuals, specified groups, or the entire population. It is a combination of sciences, skills, and values that function through collective societal activities and involve programs, services, and institutions aimed at protecting and improving the health of all people. The term “public health” can describe a concept, a social institution, a set of scientific and professional disciplines and technologies, and a form of practice. It is a way of thinking, a set of disciplines, an institution of society, and a manner of practice. It has an increasing number and variety of specialized domains and demands of its practitioners an increasing array of skills and expertise.²

Simply put, public health is a system that aims to promote, protect and improve health and well-being. Public health interventions (i.e., legislation, policies, programs, services) focus on creating environments that support health; promote and protect health; prevent health problems from happening; address differences in health; and monitor the health of populations.

Goals/Values

Public health shares the same overall goals as the other areas of the health system: reducing premature death and minimizing the effects of disease, disability and injury. However, public health achieves these goals by focusing “upstream” through preventing illness, protecting and promoting health and well-being.

The important values that guide public health include the following:

- Commitment to equality, social justice and sustainable development.
- Recognition of the importance of the health of the community as well as the individual.
- Respect for diversity, self-determination, empowerment and community participation.

Roles

Public health works to improve the health of the population by:

- Determining the factors that influence health.
- Identifying why some populations are healthier than others.
- Using that information to develop and implement public health interventions to improve the health and well-being of those populations experiencing poor health.
- Advocating for healthy public policies and services that promote the health and well-being of individual and communities.

The public health system tends to operate in the background, overseeing the health of a population, little-known unless there is an unexpected outbreak of disease. In fact, public health plays many valuable roles in protecting and promoting the health of the population (See sidebar).

Examples of Public Health Roles³

- ▶ *Develop and deliver province-wide vaccination programs.*
- ▶ *Assess, analyze and report on the health status of citizens.*
- ▶ *Manage communicable disease outbreaks.*
- ▶ *Encourage and/or support healthy behaviours to prevent chronic diseases and injuries.*
- ▶ *Increase public awareness regarding the importance of wearing bicycle helmets.*
- ▶ *Explore the health effects on people of exposure to a known environmental hazard.*
- ▶ *Monitor information to identify outbreaks and trends in certain illnesses and diseases, and intervene to prevent the spread of illness and disease.*
- ▶ *Create policies in schools and child care centres to ensure healthy eating practices are established early in life.*
- ▶ *Advocate for sustainable housing and healthy public policies to reduce tobacco use, promote seatbelt use, and enhance opportunities for physical activity.*
- ▶ *Ensure that water and food supplies are safe for consumption.*
- ▶ *Provide services during natural and human-made disasters.*
- ▶ *Reduce harm associated with injection drug use.*

Why is Public Health Important?

The average lifespan of Canadians has increased by 30 years since the early 1900s, and 25 of those years are attributable to advances in public health,⁴ such as the following (see also sidebar):

Prevention and control of infectious diseases: One hundred years ago, infectious diseases were the leading cause of death in Canada; now they cause less than 5 per cent of deaths. This improvement is due to factors such as immunizations against communicable diseases, improvements to sewage and drinking water treatment, quarantine of infected people, legislation and policies to stop the spread of some infections, and antibiotics.⁵

Safer workplaces: Into the 1900s, many diseases or injuries were associated with unsafe workplaces or hazardous occupations. The rate of work-related injury has declined steadily since 1988, and public health has played a leadership role in enhancing workplace health.⁵

The rate of work-related injury has declined from 40 injuries among every 1,000 workers in 1988 to 20 per 1,000 in 2006.⁵

Motor vehicle safety: The rate of motor vehicle-related deaths among Canadians has declined since the 1970s, due to factors such as new safety standards, legislation and enforcement (e.g., seatbelt use, drunk driving, and speed limits), and changes in public attitudes toward road safety. Public health has played a research and prevention role in enhancing motor vehicle safety.⁵

Motor vehicle-related deaths have decreased from 6,000 per year in the 1970s to the current rate of 2,500 a year.⁵

Safer food and water: One hundred years ago, contaminated food, water and milk caused typhoid fever, tuberculosis, botulism, and other foodborne illnesses. Disinfection of drinking water and pasteurization of milk products were critical to improving health outcomes. Public health efforts continue today to monitor all components of food production and food imports and ensure safe drinking water.⁵

Decline in deaths from cardiovascular disease: The Canadian death rate from cardiovascular disease has declined steadily since the mid-1960s. This is due to a combination of factors, including prevention (e.g., lower smoking rates, increased consumption of vegetables and fruit), better diagnosis and treatment of high blood pressure and cholesterol, and better management of those with cardiovascular

12 Great Achievements in Public Health⁵

- Control of infectious diseases.
- Safer workplaces.
- Motor vehicle safety.
- Safer and healthier food.
- Decline in deaths from cardiovascular disease.
- Recognition of tobacco use as a health hazard.
- Healthier mothers and babies.
- Universal policies (benefits awarded solely on the basis of age, residence, or citizenship, without reference to the recipient's income or assets).
- Family planning.
- Healthier environments.
- Vaccination.
- Acting on the social determinants of health.

disease. The decrease in cardiovascular disease is due in part to public health's use of health promotion strategies including legislation, social marketing and healthy public policy.⁵

Recognition of tobacco use as a health hazard: Canada has seen a dramatic decline in tobacco consumption, along with a shift in attitudes. Public health has played a leadership role in controlling tobacco use through legislation, policy, research and prevention—although notably without criminalizing either tobacco users or producers.⁵

1998 – BC was the first province in Canada to launch a lawsuit for the recovery of tobacco-related health care costs.

1999 – Victoria, BC was the first city in Canada to ban smoking in all workplaces and public spaces.⁵

Reduction of harms from other psychoactive substances: While reduction of tobacco use has been a notable public health success story, other kinds of psychoactive substance use and addiction continue to generate significant health harms. Public health responses—as alternatives or complements to criminal justice and other policy approaches—have significantly reduced avoidable health harms.

Healthier mothers and babies: In the early 1900s, many mothers and infants died in childbirth or shortly after. Since that time, maternal and infant death rates have declined thanks to improved sanitation, family planning, nutrition, standard of living and level of education. Public health has been instrumental in providing maternal and newborn services and in advocating for healthy public policies that improve maternal and infant health.⁵

In 2012, BC introduced universal full-day kindergarten for all five-year-olds. Full-day kindergarten has been shown to increase reading ability, increase social skills, increase positive self concept and increase the ability to identify and treat learning disabilities early. Public health, along with others, advocated for full-day kindergarten to move from a targeted approach to a universal program, as the benefits were seen for all children.

Universal policies: Public health advocates have been instrumental in advocating for healthy public policies – those that contribute to the health and well-being of individuals, families and populations.

The above examples show some of the important contributions public health has made to improve the health of Canadians. Through continued public health efforts the population can be healthier, which may reduce the demands on the health system and assist in creating a long-term sustainable health system.

Working in public health means taking the long view, as prevention efforts often take many years to be realized. It also means gaining job satisfaction by seeing things not happen, rather than happen. For example, the lack of smokers, or the lack of meningitis due to haemophilus influenza type B, are not visible but are important indicators of many lives saved and disabilities prevented. Working in public health can mean taking on daunting challenges such as the contributors to healthy early childhood development, alcohol misuse, or the influences of poverty on health.

The History of Public Health in Canada

The Beginnings ^{a,6}

Prior to Europeans arriving and settling in North America, Canada was inhabited by millions of Indigenous peoples. Their health, culture and societies were greatly affected by increased European immigration, which began in the 1600s.

As European immigration grew, many ships arrived with large numbers of sick passengers, many suffering from communicable diseases. Aboriginal peoples were particularly susceptible to these disease outbreaks because they had no previous exposure to these diseases and lacked immunity. Countless Aboriginal people died from these communicable diseases. In 1721 the *Quarantine Act* was passed because of fears that the Black plague that was spreading across Europe would arrive in Canada.

In the early to mid-1800s there were large epidemics of communicable diseases, including cholera and typhus. In an attempt to contain these diseases, new settlers were sent to quarantine stations, where they were held until it was clear they did not have a communicable disease. Quarantine measures were enforced by the military to prevent the spread of disease through Upper and Lower Canada. The government of Lower Canada also authorized the establishment of temporary local boards of health (the precursor of public health) in Quebec and Montreal and gave the boards the power and the funds to operate quarantine stations. In 1854 the Canadian Central Board of Health was established to strengthen the quarantine system in an effort to address numerous communicable disease epidemics.

A smallpox epidemic that struck eastern Ontario in 1884 gave the Ontario Provincial Board of Health its first opportunity to manage a serious infectious disease threat. The Provincial Board of Health ordered schools and churches closed, banned public gatherings, suspended stagecoach service, and posted constables on the roads and railway stations to control the movement of anyone who might be carrying the disease. Medical students were brought in to conduct house-to-house small pox vaccinations, and to disinfect and fumigate all infected houses. At the end of the year there were just over 202 cases of smallpox and 45 deaths.

This is in sharp contrast to the outbreak of smallpox in Quebec in 1885. During that time there was no provincial public health response and efforts were left to religious communities. There were a total of 19,905 cases of small pox and 5,964 deaths in Quebec (3,157 of these in Montreal) that year. The Montreal outbreak would prove to be the last uncontained outbreak of smallpox in a modern city and in its aftermath, Quebec passed a public health act in 1886 and established a provincial board of health in 1887. The Montreal smallpox experience also led to a requirement that all passengers and crews of arriving vessels had to show evidence of smallpox vaccination or submit to vaccination upon their arrival in Canada.

By the late 1880s the “germ theory” of disease was becoming known and efforts shifted to the prevention of communicable diseases. During the late 19th century and early 20th century vaccines were developed and vaccination started to replace quarantine as an effective mechanism against the spread of communicable diseases. The knowledge about how germs were spread led to the development of

public health laboratories and the systematic examination of water and milk supplies as well as meat, to ensure public safety. Later efforts focused on prevention of tuberculosis and venereal diseases.

Early to Mid-20th Century – Clinical Care

In the early 20th century, public health continued to focus on communicable diseases and sanitation, through measures such as vaccination, as well as pasteurization of milk and chlorination of drinking water.

The 1920s to 1950s saw two world wars, the depression, as well as great improvements in the standard of living and an increase in overall life expectancy in Canada. Public health began to shift focus to improving the health of mothers and children.

Following World War II and into the 1950s, there were many scientific discoveries (e.g., insulin and antibiotics), and new techniques were introduced to treat injuries and diseases; as a result, the focus of health care shifted from prevention to treatment.

Until the 1970s, the prevailing belief was that access to health care was the main influence on health. As a result, most health services were directed towards treating diseases, rather than preventing disease and promoting health.

1970s and 1980s – Health Promotion

In the 1970s and 80s, there was a growing awareness that social, economic and personal factors (e.g., eating and exercise habits, tobacco and other substance use) had an influence on health. The 1974 report *A New Perspective on the Health of Canadians*⁷ (known as the Lalonde report) in Canada and the international Alma-Ata Conference⁸ in 1978 echoed this view, and the concept of “health promotion” was born.

In 1986, the First International Conference on Health Promotion was held in Ottawa. This conference resulted in the *Ottawa Charter for Health Promotion*.⁹ The Charter defined health promotion, emphasized the importance of the determinants of health, and broadened the concept of health promotion strategies beyond a focus on individual behaviour choices. This set in motion a debate about the focus for health promotion interventions (education versus system change), which aid individuals to make healthy decisions. Also released at the 1986 conference was *Achieving Health for All: A Framework for Health Promotion*.¹⁰ This report noted that to achieve health for all Canadians, it was necessary to provide a combination of health promotion, disease prevention and health care services.

The Lalonde Report

*The 1974 report A New Perspective on the Health of Canadians (known as the Lalonde report), was a foundational document for public health, and put Canada on the world stage with respect to prevention. It was one of the first acknowledgements that medical interventions (e.g., physician services, hospital services, pharmaceuticals, etc.) were not primarily responsible for the health and well-being of individuals and populations. The paper identified two main aspects of health—the health care system; and prevention of health problems and promotion of good health—and proposed integrating these two aspects in health policy development.*⁷

Alma-Ata Conference

*In September 1978, the World Health Organization (WHO) and UNICEF convened the Alma-Ata Conference, which adopted the goal of “health for all by 2000” and initiated an approach that defined “the need for a comprehensive strategy that not only provides health services, but also addresses the underlying social, economic and political causes of poor health.”*⁸

Ottawa Charter for Health Promotion

*The Ottawa Charter noted that improvement in health requires a secure foundation in nine basic prerequisites or fundamental conditions: peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity.*⁹

1990s

Starting in the 1990s, there was increasing interest in the factors that influence health status: the determinants of health. These determinants are a mix of social, economic and personal factors that influence the ability of people to make lifestyle choices, sometimes positively and sometimes negatively. (See Module 2 for more information on the determinants of health).

Public Health Renewal

Since the 1970s most Canadian provinces changed the organizational structure for the provision of public health services. Many of these organizational changes also included staffing and service cuts that eroded the public health infrastructure. Starting in the late-1990s, health care providers began to express concern about the state of public health in Canada. The Federal/Provincial/Territorial Advisory Committee on Population Health presented a *Review of Public Health Capacity in Canada*¹¹ to the Deputy Ministers of Health in June 2001, outlining concerns about public health's reduced capacity to function optimally throughout the country.

The 2003 outbreak of Sudden Acute Respiratory Syndrome (SARS) in Canada, the Walkerton *E. coli* outbreak in Ontario and concerns internationally about bio-terrorism demonstrated the necessity of a well-functioning public health system. *Learning from SARS: Renewal of Public Health in Canada*⁴ (the Naylor report), which arose out of the SARS outbreak, reinforced the idea that "...an effective public health system is essential to preserve and enhance the health status of Canadians, to reduce health disparities, and to reduce the costs of curative health services."⁴

What is the Public Health System?

The Components of the Health System

Canada has a publicly funded health system that is a shared responsibility between federal and provincial/territorial governments. Among other functions the federal government is responsible for funding the system, and the provincial/territorial governments are responsible for the organization, planning, delivery and evaluation of the system. There are several components to the system.

Public Health: Public health functions within, and is one of the components of, the overall health system. Unlike the rest of the health system, which is oriented to care and treatment of people who are ill, public health includes a wide range of interventions aimed at improving health through prevention, protection and health promotion. Public health interventions are delivered in a variety of settings (e.g., home, school, workplace, community, business). (See Module 4 for more information on how public health is organized in BC).

Hospital (Acute) Care: Hospital care, sometimes called “acute care”, focuses on the short-term treatment of disease, illness and injuries. Treatment is provided by a broad range of health professionals and may involve a short stay in an emergency department, admission to a hospital, the assistance of diagnostic services, surgery, or follow-up outpatient care in the community.

Home and Continuing Care: Home and continuing care encompass a wide range of health services delivered at home and throughout the community to people needing assistance with medications or treatments, or support to remain in their home. Continuing care also includes supportive housing and long-term residential care.

Primary Care: Primary care focuses on providing services to individuals (and sometimes families) aimed at preventing health problems and managing health problems that occur. It is the first point of contact people have with the health system through a doctor, a nurse practitioner, a midwife or other health professional, or perhaps through phone or computer-based services.

Palliative and End-of-Life Care: Palliative care—also called hospice care—encompasses care for people who are dying. The focus of care is on achieving comfort and ensuring respect for the person nearing death and maximizing quality of life for the patient, family and loved ones.

Public Health and the Rest of the Health System: A Comparison

There are two underlying characteristics that distinguish public health from other components of the health system:

- Public health focuses primarily on the promotion of health and the prevention (and control) of diseases and injuries, rather than treatment of diseases.
- Public health addresses the health needs and issues of populations (e.g., Aboriginal, low-income families) as a whole instead of individuals.

However, despite these differences, public health works closely with other components of the health system. The closest interactions are often seen between public health and primary care. There is often overlap between the work of public health and primary care, as activities are not mutually exclusive to one component of the health system. Table 1.1 gives examples of the roles and functions carried out by public health and primary care.

An example of public health working in tandem with the rest of the health system was the H1N1 influenza pandemic. Public health was responsible for developing a health system response to the pandemic, (i.e., developing pandemic preparedness protocols and guidelines prior to the emergence of the virus; monitoring the progress of the pandemic; managing vaccine supply; monitoring vaccine coverage rates in the population; and communicating with stakeholders).

The other health system components were responsible for regularly reviewing H1N1 updates and protocols; providing clinical expertise to guide and inform policies; and immunizing the public.

Table 1.1: Comparison of Selected Public Health and Primary Care Roles

Function	Public Health	Primary Care
Prevention of Communicable Diseases	<ul style="list-style-type: none"> • Develop policy (e.g., which vaccines to administer) • Manage the vaccine administration system • Track population vaccine coverage rates • Monitor/investigate adverse events • Develop and routinely analyze immunization registry system • Identify and disseminate effective strategies to address immunization coverage gaps • Investigate cases/outbreaks of vaccine-preventable diseases • Undertake social marketing (e.g., hand washing) 	<ul style="list-style-type: none"> • Administer vaccines • Report adverse events • Participate in implementation of strategies to address gaps in immunization coverage • Monitor coverage rates in client population • Report immunizations provided • Report vaccine-preventable diseases

Function	Public Health	Primary Care
Control of Communicable Diseases	<ul style="list-style-type: none"> • Develop policy and regulations (e.g., which diseases are reportable) • Investigate cases and clusters and ensure contact follow-up • Provide information to providers regarding trends, management of cases, emerging issues • Develop public health laboratory network • Monitor trends to identify outbreaks • Develop comprehensive strategies to reduce disease using population health approaches • Develop/arrange for services to address gaps in primary health (e.g., youth sexual health clinics, services for street-linked population, needle exchange) • Undertake social marketing (e.g., STOP HIV/AIDS) 	<ul style="list-style-type: none"> • Identify, diagnose and treat clients with communicable diseases • Report cases to public health • Contact follow-up in certain circumstances • Provide counseling • Participate in community needs assessment/gap analysis
Prevention of Chronic Diseases	<ul style="list-style-type: none"> • Develop policy and regulations (e.g., tobacco legislation) • Undertake population health assessment • Undertake disease surveillance • Develop comprehensive prevention strategies to reduce disease using population health approaches • Build inter-sectoral partnerships (all levels of government, non-government, civil society, business, recreation) • Undertake applied research • Undertake social marketing (e.g., Healthy Families BC Sodium City) 	<ul style="list-style-type: none"> • Screen and assess for risk factors • Identify, diagnose and treat chronic disease • Provide clinical preventive interventions such as preventive medication advice • Provide brief advice and/or counseling • Participate in community needs assessment/gap analysis
Prevention of Injuries	<ul style="list-style-type: none"> • Develop policy and regulations (e.g., bike helmets) • Undertake population health assessment • Undertake injury surveillance • Develop comprehensive prevention strategies to reduce disease using population health approaches • Build inter-sectoral partnerships (all levels of government, non-government, civil society, business, recreation) • Undertake applied research (e.g., seniors falls) • Undertake social marketing 	<ul style="list-style-type: none"> • Assess clients for risk factors • Identify, diagnose and treat injuries • Report cases of suspected abuse

Function	Public Health	Primary Care
Healthy Development	<ul style="list-style-type: none"> • Develop policy (e.g., Child Health Standards) • Undertake population health assessment • Undertake disease surveillance • Develop comprehensive prevention strategies to reduce disease using population health approaches • Build inter-sectoral partnerships (all levels of government, non-government, civil society, business, recreation) • Undertake applied research • Undertake social marketing (e.g., breast feeding) 	<ul style="list-style-type: none"> • Provide pre-pregnancy and pregnancy counselling and monitoring • Provide prenatal and postnatal screening • Provide well-baby screening and assessment • Provide childhood screening and assessment • Participate in community needs assessment/gap analysis
Environmental Health	<ul style="list-style-type: none"> • Develop policy and regulations (e.g., Drinking Water) • Undertake population health assessment • Undertake disease surveillance • Develop comprehensive prevention strategies to reduce disease using population health approaches • Build inter-sectoral partnerships (all levels of government, non-government, civil society, business, recreation) • Undertake applied research (e.g., West Nile Virus) • Undertake social marketing 	<ul style="list-style-type: none"> • Diagnose and treat patients with diseases of environmental origin • Report diseases of environmental origin, or exposures of concern, to public health
Public Health Emergency Preparedness	<ul style="list-style-type: none"> • Develop policy and regulations (e.g., Pandemic Planning) • Develop comprehensive prevention strategies to reduce disease using population health approaches • Build inter-sectoral partnerships (all levels of government, non-government, civil society, business, recreation) • Undertake applied research • Undertake social marketing (e.g., Stop, Drop and Cover) 	<ul style="list-style-type: none"> • Treat patients impacted by emergencies • Provide information to public health about health impacts of emergencies

Reflective Questions

- How would you describe the work of public health to your friends and family?
- Does the definition of public health resonate with your interest in public health?
- What other contributions has public health made over the past century?
- How does public health affect the life of your family?

Module Highlights

- Public health's role is to protect and promote the health and well-being of citizens by determining the factors that influence health, identifying the reasons why some populations are healthier than others, and using that information to develop and implement interventions aimed at improving the health and well-being of those populations experiencing health challenges.
- Public health shares the same overall goals as the other areas of the health system: reducing premature death and minimizing the effects of disease, disability and injury.
- Public health is largely responsible for a 25-year increase in life expectancy across industrialized nations in the 20th century.
- Two underlying characteristics that distinguish public health from the other components of the health system:
 - public health focuses on promotion, protection and prevention rather than treatment; and
 - public health addresses the health needs of populations as a whole.
- From its inception until the early 20th century, public health focused on the prevention and control of communicable diseases through measures such as quarantine, sanitation, food security, drinking water safety and vaccination.
- In the 1940s to 1970s, due to success in preventing many communicable diseases, the focus of public health expanded to include the prevention of chronic diseases and improving the health of mothers and children.
- Between the 1970s and the 1990s public health began to encompass identifying and addressing the factors that determine health status (the determinants of health), including education, housing, income, social and physical environments, and addressing inequities in health status in populations.
- The 2003 SARS outbreak in Canada underscored the necessity of public health. The Naylor report, which arose out of the SARS outbreak, reinforced the idea that an effective public health system is an essential component of health care.

Additional Resources

History of Public Health in Canada – The Canadian Public Health Association has a webpage that contains links to many documents outlining the history and milestones of public health in Canada over the past 100 years. Available at: <http://resources.cpha.ca/CPHA/ThisIsPublicHealth/landing.php?l=E>

A New Perspective on the Health of Canadians: a Working Document – Known as the Lalonde report. This 1974 paper identifies two main aspects of health care: the health care system and prevention of health problems and promotion of good health. It proposes integrating these two aspects in health care policy development. Available at: <http://www.hc-sc.gc.ca/hcs-sss/com/fed/lalonde-eng.php>

Alma-Ata Conference – The Alma-Ata Conference, convened by the World Health Organization and UNICEF in 1978, formally adopted the goal of “health for all by 2000” and initiated an approach that defined “the need for a comprehensive strategy that not only provides health services, but also addresses the underlying social, economic and political causes of poor health.” Available at: <http://www.paho.org/English/DD/PIN/almaata25.htm>

Ottawa Charter for Health Promotion – This international agreement was signed at the First International Conference on Health Promotion in 1986. It launched a series of actions among international organizations, national governments and local communities to achieve the goal of “Health For All” by the year 2000 and beyond through better health promotion. Available at: <http://www.phac-aspc.gc.ca/ph-sp/docs/charter-chartre/pdf/charter.pdf>

Achieving Health for All: A Framework for Health Promotion – This paper focuses on reducing the inequities in the health of low-income groups and offers implementation strategies such as encouraging public participation, strengthening community services, and coordinating healthy public policy. Available at: <http://www.hc-sc.gc.ca/hcs-sss/pubs/system-regime/1986-frame-plan-promotion/index-eng.php>

Strategies for Population Health: Investing in the Health of Canadians

Report on the Health of Canadians – The Federal/Provincial/Territorial Advisory Committee on Population Health outlined a population health framework and strategic directions in 1994 at a meeting of the Ministers of Health. Available at: <http://www.phac-aspc.gc.ca/ph-sp/pdf/strateg-eng.pdf>. Subsequently, the *Report on the Health of Canadians* was released in 1996, presenting the results from the first collaborative effort among federal, provincial and territorial governments to measure the health of Canada’s population. Available at: <http://publications.gc.ca/collections/Collection/H39-385-1996-1E.pdf>

Canada Health Action: Building on the Legacy – This report, released in 1997, came from the work of the National Forum on Health. From 1994 to 1997, the Forum looked at innovative ways to improve the health of Canadians and the Canadian health care system. The Forum’s recommendations were organized under the headings of values, striking a balance, determinants of health and evidence-based decision-making. Available at: <http://www.hc-sc.gc.ca/hcs-sss/pubs/renewal-renouv/1997-nfoh-fnss-v1/index-eng.php>

Celebrating our Past – This document outlines a speech given by Dr. John E.F. Hastings to the Annual Meeting of the Ontario Public Health Association in November 1999. It provides a comprehensive overview of the history of public health in Canada. Available at: <http://www.opha.on.ca/resources/docs/celebrating-the-past.pdf>

Review of Public Health Capacity in Canada – This review outlines concerns about public health’s reduced capacity to function optimally throughout the country. This report was never formally disseminated. Available at: <http://www.parl.gc.ca/Content/SEN/Committee/372/soci/rep/repocto2vol6part8-e.htm>

An Emergency Management Framework for Canada – This framework calls for partnerships and collaboration between all sectors of Canadian society. Available at: <http://www.publicsafety.gc.ca/prg/em/emfrmwrk-2011-eng.aspx>

A New Perspective on the Health of Canadians – This framework gave impetus to national and international initiatives in knowledge development, health promotion, health protection and health care, which have contributed not only to the health of Canadians, but also to global health initiatives. Available at: <http://www.phac-aspc.gc.ca/ph-sp/pdf/perspect-eng.pdf>

Learning from SARS: Renewal of Public Health in Canada – This document, by the National Advisory Committee on SARS and Public Health, which arose out of the SARS outbreak, reinforced the idea that “...an effective public health system is essential to preserve and enhance the health status of Canadians, to reduce health disparities, and to reduce the costs of curative health services.” Available at: <http://www.phac-aspc.gc.ca/publicat/sars-sras/naylor/>

Glossary of Terms^{b,12}

Aboriginal	Aboriginal peoples include Indian, Métis and Inuit.
Antibiotics	a class of substances produced by living organisms, such as plants and fungi, capable of killing or inhibiting the growth of pathogenic bacteria.
Botulism	a severe, sometimes fatal food poisoning caused by ingestion of food containing botulin and characterized by nausea, vomiting, disturbed vision, muscular weakness, and fatigue.
Cardiovascular disease	a term covering all diseases of the heart and blood vessels.
Chlorination	the process of water treatment involving infusion of chlorine gas or a chlorine compound into drinking water in order to kill pathogenic organisms such as coliforms that would otherwise be present and would cause disease if ingested. An effective method of purifying water for drinking and use in swimming pools.
Cholera	an infectious disease characterized by intense vomiting and profuse watery diarrhea and that rapidly leads to dehydration and often death.
Chronic diseases	disease that is long-lasting or permanent.
Communicable disease	infectious disease, contagious disease.
Community participation	procedures whereby members of a community participate directly in decision-making about developments that affect the community. It covers a spectrum of activities ranging from passive involvement in community life to intensive action-oriented participation in community development (including political initiatives and strategies).
Determinants of health	a mix of social, economic and personal factors that can work together or independently to influence the ability of people to make lifestyle choices, sometimes positively and sometimes negatively. ¹³ They include income/social status; social support networks; education; employment/working conditions; social environments; physical environments; personal health practices and coping skills; healthy child development; biology and genetic endowment; health services; gender; and culture. ¹⁴
Disease outbreaks	the occurrence of cases of disease in excess of what would normally be expected in a defined community, geographical area or season.
Disinfection	the process of killing pathogenic organisms or rendering them inert.
Diversity	the demographic characteristic of populations attributable to perceptible ethnic, linguistic, cultural, visible or social variation among groups of individuals in the general population.

Empowerment	a process through which people gain greater control over decisions and actions affecting their health. Empowerment may be a social, cultural, psychological or political process through which individuals and social groups are able to express their needs, present their concerns, devise strategies for involvement in decision-making, and achieve political, social and cultural action to meet those needs.
Equality	the state or quality of being equal.
Health	a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.
Health promotion	the process of enabling people to increase control over, and to improve, their health. ¹⁰
Health systems	the organization of people, institutions, and resources to deliver health care services to meet the health needs of target populations. It is all the activities whose primary purpose is to promote, restore, or maintain health.
Immunization	the artificial introduction of a specific antigen to create an antibody that stimulates the immune system, the natural disease-fighting system of the body. The healthy immune system is able to recognize invading bacteria and viruses and produce substances (antibodies) to destroy or disable them.
Infectious disease	also known as communicable disease. A disease caused by a specific disease-causing agent or its toxic products, arising as a consequence of transmission to a susceptible host by or from an infected person, animal, or other reservoir.
Infirmity	a bodily ailment or weakness, especially one brought on by old age.
Nutrition	the sum total of the processes involved in the taking in and the utilization of food substances by which growth, repair and maintenance of the body are accomplished. It involves ingestion, digestion, absorption and assimilation.
Pandemic	an epidemic, usually caused by an infectious pathogen, which goes beyond national boundaries and extends over much of or the entire world, attacking people in all affected regions.
Pasteurization	a process of heating a food, which is usually a liquid, to a specific temperature for a predefined length of time and then immediately cooling it after it is removed from the heat.
Population	the total number of persons inhabiting a country, city, or any district or area.

Public health	an organized activity of society to promote, protect, improve, and when necessary, restore the health of individuals, specified groups, or the entire population. ² Public health protects and promotes the health and well-being of populations.
Publicly funded health system	provides access to universal, comprehensive coverage for medically necessary hospital and physician services without direct charges to the individual. Frequently referred to as “medicare”. There are several components: primary care; hospital (acute) care; home and continuing care; palliative and end-of-life care; and public health.
Quarantine	compulsory isolation, typically to contain the spread of something considered dangerous, often but not always disease.
Sanitation	the hygienic means of promoting health through prevention of human contact with the hazards of wastes.
Social justice	refers to the concept of a society that gives individuals and groups fair treatment and an equitable share of the benefits of society. In this context, social justice is based on the concepts of human rights and equity. Under social justice, all groups and individuals are entitled equally to important rights such as health protection and minimal standards of income. The goal of public health — to minimize preventable death and disability for all — is integral to social justice.
Standard of living	refers to the level of wealth, comfort, material goods and necessities available to a certain socioeconomic class in a certain geographic area.
Surveillance	systematic, ongoing collection, collation, and analysis of health-related information that is communicated in a timely manner to all who need to know which health problems require action in their community. Surveillance is a central feature of epidemiological practice, where it is used to control disease. Information that is used for surveillance comes from many sources, including reported cases of communicable diseases, hospital admissions, laboratory reports, cancer registries, population surveys, reports of absence from school or work, and reported causes of death.
Sustainable development	the use of resources, investments, technology and institutional development in ways that do not compromise the health and well-being of future generations. There is no single best way of organizing the complex development-environment-health relationship that reveals all the important interactions and possible entry points for public health interventions.

- Typhoid fever** an acute, highly infectious disease caused by a bacillus (*Salmonella typhi*) transmitted chiefly by contaminated food or water and characterized by high fever, headache, coughing, intestinal hemorrhaging, and rose-colored spots on the skin.
- Tuberculosis** a potentially fatal contagious disease that can affect almost any part of the body but is mainly an infection of the lungs.
- Typhus** any of several forms of infectious disease caused by rickettsia, especially those transmitted by fleas, lice, or mites, and characterized generally by severe headache, sustained high fever, depression, delirium, and the eruption of red rashes on the skin.
- Universal programs** the common factor for all universal health care programs is that they require some form of government involvement, whether it is through legislation, mandates, or regulation.
- Vaccine** biological preparation that improves immunity to a particular disease.
- Vulnerable** susceptible to physical or emotional injury.

Endnotes

- a. This section on the history of public health in Canada is adapted from *This is Public Health: A Canadian History* by C. Ruty and S.C. Sullivan (2010).
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Module 2

Population Health and the Determinants of Health



Objective

Upon completion of Module 2, participants will understand:

- › Public health and its relationship with population health.
- › The determinants of health and how they positively and negatively influence health.
- › Health status disparities and health inequities.

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Ministry of
Health

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Public Health and Population Health

Populations are dynamic, evolving entities that change over time. It is important to understand what factors influence or determine the health of populations (and sub-populations), in order to make policy and programming decisions that protect and maintain the health of the population. A healthy population is productive and contributes to all aspects of society.

What Is Population Health?

Population health

...refers to the health of a population as measured by health status indicators and as influenced by social, economic and physical environments, personal health practices, individual capacity and coping skills, human biology, early childhood development, and health services.¹

A population health approach is concerned with understanding the determinants of the health, which focus on the broad upstream, social, cultural, environmental and economic conditions that have an impact on the health of a population. Addressing these determinants requires societal commitment and action, as many are beyond the jurisdiction of the public health system and the health system.

As an approach, population health focuses on the interrelated conditions and factors that influence the health of populations over the life course, identifies systematic variations in their patterns of occurrence, and applies the resulting knowledge to develop and implement policies and actions to improve the health and well-being of those populations.¹

Determinants of Health

Starting in the 1990s, there was increasing interest in understanding what factors influence health status. Much of the research indicates that health is influenced by factors both within and outside of the health care system.

At every stage of life, health is determined by complex interactions between social and economic factors, the physical environment and individual behavior. These factors are referred to as 'determinants of health'. They do not exist in isolation from each other. It is the combined influence of the determinants of health that determines health status.²

There is mounting evidence that the health system's contribution to an individual's health is limited, and that focusing efforts on other factors that determine health may have a larger impact on a population's health.

The Determinants of Health—A Story¹

This simple story speaks to the complex set of factors or conditions that determine the health of every Canadian.

Why is Jason in the hospital?

‣ *Because he has a bad infection in his leg.*

But why does he have an infection?

‣ *Because he has a cut on his leg and it got infected.*

But why does he have a cut on his leg?

‣ *Because he was playing in the junkyard next to his apartment building and there was some sharp, jagged steel there that he fell on.*

But why was he playing in a junkyard?

‣ *Because his neighbourhood is kind of run down. A lot of kids play there and there is no one to supervise them.*

But why does he live in that neighbourhood?

‣ *Because his parents can't afford a nicer place to live.*

But why can't his parents afford a nicer place to live?

‣ *Because his Dad is out of work and his Mom is sick.*

But why is his Dad out of work?

‣ *Because he doesn't have much education and he can't find a job.*

But why ...?

Figure 2.1: Determinants of Health³



Addressing the Determinants of Health

Culture: The Power of the Transformative Change Accord

The 2005 Transformative Change Accord (TCA) is a foundational agreement in the development of a collaborative partnership between the governments of British Columbia and Canada and First Nations Leadership in BC. The purpose of the TCA is to bring the signatories together to achieve the goals of closing the social and economic gap between BC First Nations and other British Columbians; reconciling Aboriginal rights to traditional practices and to the land with the Crown; and establishing a new relationship based upon mutual respect and recognition. This agreement, the first of its kind in Canada, has a 10-year implementation strategy focusing on improving the social determinants of health by closing the gaps that exist between BC First Nations and other British Columbians in education, housing and infrastructure, health and economic opportunities. Since its creation, the TCA has led to a number of successive agreements, including the formation of the new First Nations Health Authority.

The Determinants of Health⁴

Social Support Networks – Support from families, friends and communities is associated with better health.

Education – Health status improves with each level of education. Education increases opportunities for income and job security, and gives people a sense of control over life circumstances—key factors that influence health.

Employment/Working Conditions – Unemployment is associated with poorer health. People with more control over their work and fewer stressful job demands are healthier.

Physical Environments – Physical factors in the natural environment (e.g., air and water quality) influence health, as do factors in the human-built environment (e.g., housing and community and road design).

Biology and Genetic Endowment – Basic biology and organic make-up of the human body are a fundamental determinant of health. Genetic endowment provides an inherited predisposition to a wide range of individual responses that affect health status.

Personal Health Practices and Coping Skills – Actions by individuals to prevent disease and promote self-care, cope with challenges, and make healthy choices.

Healthy Child Development – Prenatal and early childhood experiences have an effect on subsequent health, well-being, coping and competence.

Health Services – Health services contribute to the population’s health, particularly those that maintain and promote health, prevent disease, and restore health and function.

Social Environments – Social stability and strong communities can help reduce health risks.

Gender – Gender refers to the society-determined roles, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis. Many health issues are a function of gender-based social status or roles.

Culture – Belonging to a particular race or ethnic or cultural group influences health. The health of members of certain cultural groups can be more vulnerable because of cultural differences and the risks to which the group as a whole are exposed.

Income/Social Status – High income promotes good living conditions (e.g., safe housing and the ability to buy sufficient food). The healthiest populations are in prosperous societies where there is an equitable distribution of wealth.

Health Status Disparities and Health Inequities

The determinants of health impact the health of the entire population. However, determinants are not evenly distributed in the population and do not affect the population uniformly (e.g., income levels vary within a population), which results in differences in health status for different sub-populations within the population. These differences in health status are known as health disparities (or health inequalities).⁵ These inequalities can be seen playing out time and again, across all nations and across all settings—homes, schools, workplaces and neighbourhoods.

The differences in health status cannot be explained by access to health care, which accounts for a relatively small proportion of the health status differences

Addressing the Determinants of Health

Gender: Impact on Development and Application of Policy

Women and men can respond differently to the same health issue, such as heart disease or Type 2 diabetes. Thus, a one-size-fits-all approach is not optimal for the prevention and treatment of diseases or conditions that affect women differently than men. Adopting a sex- and gender-inclusive approach increases the likelihood that health interventions will be more relevant and appropriate to both women and men in BC, leading to improved health outcomes.

among British Columbians. Nor can it be explained entirely by lifestyle behaviours (e.g., tobacco and alcohol use, diet and physical activity). Instead, the evidence indicates that over 75 per cent of the differences in health status result from differences in physical, social and environmental living conditions.⁶

When this health disparity is avoidable or preventable, it is considered to be unjust or unfair, and constitutes a health inequity. To the extent that these differences are preventable and avoidable, they are also a significant public health issue and a societal concern.

Health and illness tend to follow a social gradient: the poorer a person is, the worse their health is and the more illness they experience. This gradient is of concern, because every step down the socio-economic ladder represents an additional burden of disease on society in general, and on the health system.

Inequality vs. Inequity

Inequity and inequality are closely related in origin and are frequently confused. Inequality refers primarily to the condition of being unequal, and it tends to relate to things that can be expressed in numbers (e.g., older people are less mobile [able to move] than younger people, so this is an inequality in the rate of mobility). Inequity, in its main sense, is a synonym of injustice and unfairness, so it usually relates to more qualitative matters. For example, in the situation above, if older people are less mobile because the physical environment they live in is unsafe and they cannot walk in their neighbourhood, or their income level is low and they only have enough money to buy food and no money available for recreation or aids to help them be active (e.g., canes or walkers)—i.e., things that are outside of their control and are amenable to change—the inequality is unjust or unfair and is considered an inequity.⁷

The Public Health Role in Improving Population Health

The terms public health and population health have been used, often loosely, without definition and interchangeably. The distinction between public health and population health deserves attention since it has been at times both confusing and even divisive.

Traditionally, public health has been understood to be the critical functions of the Canadian public health system (i.e., federal, provincial/territorial and regional public health components) to promote, protect, improve and restore the health and well-being of populations. Activities include preventing deaths from epidemics through immunization, promoting the health of mothers and children, containing environmental hazards, encouraging healthy behaviours, and recommending/developing healthy public policies (e.g., tobacco legislation).

Inequities in Health

Good health is not evenly distributed across BC's population. There are a significant number of British Columbians who are at greater risk for poor health than others, including

- ▶ *children and families living in poverty;*
- ▶ *homeless people;*
- ▶ *people with low incomes or who are under/unemployed;*
- ▶ *people with mental health and substance use issues;*
- ▶ *people suffering from social isolation;*
- ▶ *Aboriginal people;*
- ▶ *immigrants; and*
- ▶ *refugees.^{8,9,10,11}*

Inequities in health status are well documented. Individuals from lower income households are more likely to report a chronic disease such as diabetes and heart disease or to suffer from depression and anxiety than people from higher income households. Individuals living in rural areas are more likely to suffer from poor health than their urban counterparts. Women are more likely to have poorer health status than men for many health indicators.^{8,10,11,12,13,14}

However, as previously indicated, many determinants of health are beyond the scope of the health system. Typically, federal, provincial/territorial government structures only have responsibility for a single area of focus; no entity has responsibility for overall health improvement. Public health often plays a bridging role by connecting the key stakeholders and decision-makers, by bringing attention to the inter-connectedness of the social determinants, and by facilitating collaboration across various systems and sectors.

Public health plays several roles in improving the health of the population:

- Monitoring and assessing the health of the population (or sub-populations) to identify health issues.
- Designing public health interventions to address them.
- Delivering interventions directly or working effectively with sectors/stakeholders outside the health system.
- Helping other sectors gain a better understanding of the scale and impact of a specific health issue and so they can take appropriate strategic or remedial action.

Public health uses a population health approach to work with others to improve population health status. A population health approach focuses on addressing

the interrelated conditions and factors that influence the health of populations over the life course, identifies systematic variations in their patterns of occurrence, and applies the resulting knowledge to develop and implement policies and actions to improve the health and well being of those populations.¹⁵

A population health approach includes the following:

A whole of government focus, which works across government departments (whether federal, provincial or municipal) to develop coordinated efforts to address the determinants of health.

An inter-sectoral focus at all levels (federal, provincial or municipal), which reaches beyond government to form partnerships with the private, non-governmental and community sectors that are engaged in creating the conditions for health.

A settings focus, which reaches people in the physical and social settings where they live, learn, work and play (e.g., homes, schools, workplaces, the health care system, communities, etc.).

A capacity-building focus, which works with people and communities to build on their strengths and assets so they can “increase control over and improve their health” (the definition of health promotion provided in the *Ottawa Charter for Health Promotion*¹⁷).

Public Health and Population Health¹⁶

*When public health tackles a health issue, its interventions focus on maintaining health or preventing disease/injury. The **public health approach** to childhood obesity could involve monitoring and reporting on obesity rates and trends in a population (or sub-population); advocating for nutrition and healthy eating education for parents and children, subsidized healthy school lunch programs, and a ban on soft drinks and high sugar content snacks in school vending machines; promoting tougher regulations on marketing of junk food to children; promoting physical activity, etc.*

*A **population health approach** would tackle childhood obesity in a broader context. It could consider the food system itself: How do agricultural subsidies affect the price of healthy food? Can city or regional planning policies prevent the problem of “food deserts”, where significant areas of the population lack access to a grocery store? How can the private sector influence the societal norms on healthy eating? A population health approach could also address issues such as conditions that limit access to opportunities for physical activity.*

Reflective Questions

- How do you define health equity?
- What is the difference between inequality and inequity?
- What are some important steps that could be taken to address the needs of populations experiencing health inequities?
- How do you see the determinants of health being addressed in your community (use the population health approach to categorize the different activities)?

Module Highlights

- It is important to understand the factors that determine the health of populations (and sub-populations) in order to make policy and programming decisions that protect and maintain the health of the population.
- Population health is concerned with understanding the health outcomes for the overall population and the distribution of health outcomes within sub-populations or groups.
- The factors that determine the health of a population include social and physical environments, healthy child development, biology and genetics, education, income, employment, social supports, gender, and personal health practices.
- There are differences in health status among populations. Populations with the most resources (i.e., education, income, housing, social support) have the best health and generally live the longest. Populations with few resources have the worst health and the shortest lives. These differences in health status are a concern as they represent an additional burden of disease.
- When a difference in health status is avoidable and preventable, it is considered to be unjust or unfair, and is regarded as a health inequity. To the extent that these differences are preventable and avoidable, they are also a significant public health issue and a societal concern.
- Decreasing the differences in health status is achieved by addressing the determinants of health, which in turn changes the context in which people make decisions, allowing them to make healthier choices. Changing contexts to make an individual's default decisions healthy has one of the largest impacts on health status.
- The goal of a population health approach is to improve the health status of the entire population and to reduce the differences in health status between groups.
- Public health plays several roles in improving the health of the population including monitoring the health of the population and examining factors that determine health status. Public health has the responsibility to use that information to influence decision-makers, both inside and beyond the health care system, to address the underlying causes of the disparities.

Additional Resources

Why are Some People Healthy and Others Not? The Determinants of Health of Populations – Foundational book on the determinants of health, by RG Evans, ML Barer, TR Marmor, editors. New York: Aldine De Gruyter; 1994.

WHO Commission on Social Determinants of Health – This report is a call to action on achieving health equity by addressing the social determinants of health. Available at: http://www.who.int/social_determinants/thecommission/finalreport/en/index.html.

Evolution of the Determinants of Health, Health Policy and Health Information Systems in Canada – This journal article reviews the evolution of the determinants of health in Canada, and explores how this evolution was affected by health policy decisions and health information systems. Available at: <http://www.ajph.org/cgi/reprint/93/3/388.pdf>.

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Health Inequities in British Columbia – This Discussion Paper released in November 2008 by the Health Officers Council of BC describes health inequities in BC, and discusses policy options that offer the greatest opportunities to effectively address those inequities. Available at http://www.phabc.org/files/HOC_Inequities_Report.pdf.

Glossary of Terms ^{a,18}

Determinants of health	a mix of social, economic and personal factors that can work together or independently to influence the ability of people to make lifestyle choices, sometimes positively and sometimes negatively. ¹³ They include income/social status; social support networks; education; employment/working conditions; social environments; physical environments; personal health practices and coping skills; healthy child development; biology and genetic endowment; health services; gender; and culture. ¹⁴
Diabetes	a condition whereby the body is not able to regulate levels of glucose (a sugar) in the blood, resulting in too much glucose being present in the blood.
Gender	the array of socially constructed roles and relationships, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes. ¹⁹
Health disparities	differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups.
Health inequity	differences in health status or in the distribution of health determinants between different population groups.
Health status	the level of health of the individual, group, or population as subjectively assessed by the individual or by more objective measures.
Inequalities	the condition of being unequal. These inequalities relate to the effects of educational, housing, environmental and occupational factors, gender and ethnicity and to behavioural factors such as differences in exposure to cigarette smoking and other risk factors.
Sex	the biological, physical and genetic composition and characteristics that identify bodies as male, female, both or neither. ¹⁹
Social gradient	an individual's or population group's position in society and different access to and security of resources such as education, employment and housing.
Socio-economic status	an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position in relation to others, based on income, education, and occupation.

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Module 3

How Does Public Health Work?



Objective

Upon completion of Module 3, participants will understand:

- The five public health strategies.
- How the strategies are used to maintain and improve the health status of populations and to reduce inequities between populations in their health status.

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Ministry of
Health

Prepared by:

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How Does Public Health Work?

Public health in Canada works to identify the causes of good and poor health and act on these causes to improve the health of the population by preventing disease, illness and injury, protecting populations from health risks, and promoting healthy public policy, environments and behaviours. To accomplish this work, the public health system in Canada employs five strategies:

- Population Health Assessment
- Health Surveillance
- Health Promotion
- Disease and Injury Prevention
- Health Protection

This module will discuss these five strategies in more detail.

Population Health Assessment

Population health assessment focuses on understanding the health of the population and the distribution of good and poor health within the population. It involves assessing rates of all diseases and conditions, determinants of health, health risks including risk factors and protective factors and health status. It is concerned with monitoring population health over the long term and looking at changing trends. The results of population health assessment are used to identify, plan, prioritize and improve public health interventions.

One tool that is frequently used to assess population health is a health impact assessment. A health impact assessment is a process to evaluate the likely health impacts of interventions (i.e., legislation, policy, program, service) on a population before the intervention has begun. Health impact assessments produce a set of evidence-based recommendations aimed at informing decision-making. The recommendations aim to maximize the positive health impacts and minimize the negative health impacts of proposed interventions. Health impact assessment is most frequently used to assess interventions that are outside of the health sector, and which do not target health as their principal goal.¹

Health Surveillance

The term surveillance is based on a French term meaning “to watch over”. Health surveillance is the systematic and ongoing collection, collation and analysis of health-related information. It is concerned with identifying and monitoring trends in chronic and communicable diseases and injuries, in order to reduce the negative impact of these diseases/injuries on the population. It is also used to monitor the impact of efforts to reduce disease risk factors and disease, and of other efforts to improve health.

Example of Population Health Assessment

Oil and Gas and Human Health

There is currently a three-phase human health risk assessment (HHRA) underway of oil and gas activity in northeastern BC. The assessment was undertaken in response to a number of human health concerns raised by the public and stakeholders living in that area over increased oil and gas development in the northeast. HHRA is an evaluation of the likelihood and/or probability that a substance (such as a chemical, heavy metal or pathogen) will produce harm under specified conditions. It is a tool that is applied to inform risk management and regulatory decisions. A key element of this approach examines how people can potentially become exposed (whether through air, water, soil or food), whether exposure is likely, to what degree it could occur and whether exposure could exceed known safe levels. The HHRA will review current regulatory provisions for preventing and managing risks from oil and gas activities and if necessary, recommend management strategies and monitoring programs that could be implemented to identify and reduce potential health risks for people in the region.

Health surveillance involves the following steps:

Data Collection – ongoing, systematic collection of health-related data.

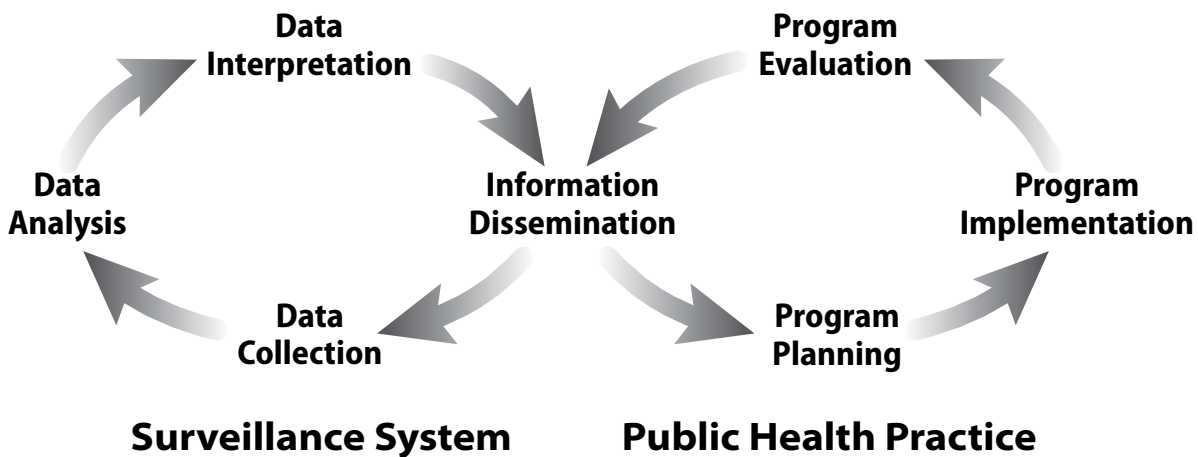
Data Analysis – data selection and analysis.

Data Interpretation – interpretation of information.

Information Dissemination – distribution of information for the planning, implementation and evaluation of public health practice.

Using multiple sources and data systems at local, provincial and national levels, the public health system regularly collects, analyzes and interprets information. Surveillance contributes to health improvement by disseminating this information, which is then used to plan, implement and evaluate policies, programs and services (see Figure 3.1).

Figure 3.1: Surveillance and Practice²



Health surveillance information is used to:

- Assess population health status and the magnitude of health problems.
- Identify newly emergent health problems.
- Track conditions of public health importance.
- Assess the public health impact of problems.
- Measure trends in health and disease over time.
- Define public health priorities.
- Support allocation of resources for disease prevention and control.
- Evaluate effectiveness and impact of interventions, policies and programs.
- Support research and evaluation.
- Reorient health services.

Health Promotion

The *Ottawa Charter for Health Promotion*, which came out of the First International Conference on Health Promotion in 1986, defines health promotion as

...the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and realize aspirations, to satisfy needs, and to change or cope with the environment. Health is therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capabilities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy lifestyles to well-being.³

The Ottawa Charter was the first to define “prerequisites for health” – now known as “determinants of health” and to state that improvements in health require a secure foundation in these basic prerequisites (see Module 2 for an overview of determinants of health).

The public health system works with partners to improve the health of individuals and communities using a variety of approaches (or strategies) including the following health promotion strategies:

- Building healthy public policy.
- Creating supportive environments.
- Strengthening community action.
- Developing personal skills.
- Reorienting health services.

These health promotion approaches will be discussed below.

Building Healthy Public Policy

Health policy, policy that is developed to govern aspects of the health system, is not the only type of policy that can influence health—all types of policies can have an impact on the health of a population. Building healthy public policy means requesting policy-makers in all sectors and at all levels (municipal, regional, provincial and federal) to be aware of how actions and decisions in their sector can affect the health of populations and to act in a manner that promotes the health of the population. It also means encouraging collaboration and coordinated action by sectors as a way to improve health and well-being. Healthy public policy often

Examples of Health Promotion

Building Healthy Public Policy: Pandemic Planning

Pandemics occur about every 10–40 years, and four have occurred in the last century: the Spanish flu (1918–19), the Asian flu (1957–58), the Hong Kong flu (1968–69), and pH1N1 (2009). Pandemic planning prepares BC’s hospitals and health facilities and health care professionals to respond to pandemic influenza. The plan describes how, in the event of a future pandemic, BC’s health system will deliver vaccines and antiviral medications, communicate with health professionals and the public, and ensure that health facilities have adequate equipment and resources to manage the influx of patients with illness symptoms.

Building Healthy Public Policy: Vending Machines

The Healthy Choices in Vending Machines in BC Public Buildings policy supports government’s priority to ensure British Columbians can make healthy food choices where they live, learn, work and play. Since 2006, this policy has applied nutrition standards to all vending machine products sold in public buildings (e.g., ministry offices, health sector and hospitals, post-secondary institutions and Crown corporations). While there are often many options for food, this policy makes the healthy choice the easy choice in vending machines, which is sometimes the only option for a quick snack.

combines approaches including legislation, fiscal measures, taxation and organizational change.

An example of healthy public policy is Municipal Alcohol Policy (other examples of healthy public policy can be found in the sidebar on the previous page).

Municipal Alcohol Policy (MAP), an initiative developed and evaluated by the Centre for Addiction and Mental Health, is one part of a comprehensive public health approach to reducing harms from alcohol in a community. A MAP is a municipal bylaw or policy, which follows provincial liquor licensing regulations to manage the sale and service of alcohol at events in municipally owned or managed settings. A MAP provides clear guidelines for alcohol use in municipal settings and reduces the risk of alcohol-related problems and lawsuits. Additionally, the process of developing and endorsing a MAP facilitates community education and mobilization on other aspects of alcohol use and related problems and harms.

Creating Supportive Environments

The environments in which people live, work and play affect their health. We live in a rapidly changing environment where our physical, social, economic and natural environments are in constant flux. This has a significant impact on health. For example, for a family living in a neighbourhood where there is high unemployment and expensive goods and services, it can be more difficult to afford healthy food or to participate in organized physical activities.

In order to create a supportive environment, it is important to examine the different aspects of the environment (physical, social, political, economic) and assess their impact on people's health. Once the impact is understood, efforts can be made to create and protect the natural and built environments in order to create supportive environments that empower people to make healthier choices where they live, learn, work and play.

Developing Personal Skills

Individuals need access to information, education and opportunities to develop life skills, in order to achieve more control over their own health. Health promotion supports the personal and social development of individuals by providing information and education. By doing so, it increases the options available to individuals to exercise more control over their own health and over their environments. Frequently health promotion efforts focus on the development of personal skills. These efforts are more successful when they are combined with other health promotion strategies, as education by itself has limited effect.

Reorienting Health Services

All components of the health care system must work together to create a health system that not only treats disease, illness and injury, but also promotes and supports health and well-being. Health services need to be sensitive and respectful of cultural needs and should support the needs of individuals, families and communities to achieve and maintain health. Reorienting health services requires working in new ways and partnering with the other sectors to ensure that health-promoting measures are in place.

In 2009 the BC Ministry of Health launched the Innovation and Change Agenda, aimed at transforming and reorienting health services in BC to meet the health care needs of British Columbians. The Innovation and Change Agenda was designed to create system-level change in four strategic areas:

- ▶ *Providing effective health promotion, prevention and self-management to improve the health and wellness of British Columbians.*
- ▶ *Meeting the majority of health needs with high quality primary and community-based health care and support services.*
- ▶ *Ensuring high quality hospital services are available when needed.*
- ▶ *Improving innovation, productivity and efficiency in the delivery of health services.*

Strengthening Community Action

Health promotion works to empower communities to improve the health of its citizens. When empowered to take action, communities set priorities, make decisions, and plan and implement strategies to meet identified health needs. The concept of community action in improving health outcomes is not new, it has its roots in the action that communities have always taken to protect and support their members. Communities increase the reach and impact of health systems by drawing on existing resources in the community to enhance social support, strengthen partnerships and increase public participation in addressing health matters and setting directions for health improvement. Community action—also known as community capacity building, community mobilization or community empowerment—is important for improving the health of the population.

Disease and Injury Prevention

Prevention is defined as

actions focused on eliminating or minimizing the impact of disease and disability, or delaying the progress of disease and disability.⁴

The goal of prevention is to stop the progression of a disease or prevent it from occurring. Prevention can involve many different approaches and numerous

Examples of Health Promotion

Strengthening Community Action: Healthy Families BC – Healthy Schools

Healthy Schools BC (HSBC) builds the capacity of schools to promote student health and learning by helping the health and education sectors work together to support a coordinated, evidence-based approach to healthy schools. Comprehensive School Health (CSH) is the approach underlying HSBC that encompasses the whole school environment. Actions occur in four inter-related areas: teaching and learning; social and physical environment; partnerships and services; and healthy school policy. When a school's actions are coordinated across all areas, it has a greater impact on student health.

Many groups are interested in creating healthy schools (e.g., students, teachers, parents, health professionals, community partners). In a CSH approach, these groups work together to assess school health needs and create action plans. Partnerships link the school to the broader community, enhancing the range of opportunities and supports available for building school capacity.

health and safety professionals and communities. It can happen at any stage in the development of a disease or injury, and can be focused on the individual or an entire population (or sub-population). There are four stages of prevention, and the public health system works primarily at the first two stages:

Primordial prevention targets interventions at the underlying determinants of health by creating/modifying legislation and policy in order to create health-supporting conditions and environments. Most primordial actions occur at the population level rather than at the individual level (e.g., sanitation, establishing healthy communities, economic reforms).⁵

Primary prevention prevents the onset of disease by changing health behaviours, reducing risk factors or enhancing the body's resistance to diseases. Primary prevention actions can occur at both the population and individual level (e.g., seat-belt legislation, most vaccinations).⁵

Secondary prevention prevents the establishment or progression of a disease once a person has been exposed to it (e.g., screening mammography program, which detects breast cancer at an early stage when intervention may be more cost-effective).⁵ Most secondary prevention actions occur on an individual level.

Tertiary prevention aims to decrease the impact of the disease through better physician and individual management (e.g., cardiac rehabilitation after a heart attack).⁵ All tertiary prevention actions occur at an individual level.

Table 3.1 gives an example of how an intervention fits into the four stages of prevention.

Table 3.1: Examples of Interventions in the Four Stages of Prevention

	Primordial	Primary	Secondary	Tertiary
Population Level	Developing healthy community environments that support physical activity and food security.	Promoting daily physical activity in schools.	Community level weight loss and physical activity programs.	—
Individual Level	—	Promoting breastfeeding to families with infants.	Risk factor screening, including physical activity, healthy eating and overweight.	Monitoring blood glucose levels and increasing physical activity and healthy eating.

Health Protection

Public health works to ensure that people have access to safe food and water, sanitation, and clean air, and that communities are protected from environmental threats and infectious diseases. Health protection tends to work primarily at a population level through development of legislation and accompanying regulation as well as through policy development (e.g., Food Premises Regulation, Meat Inspection Regulation). Health protection includes inspection, monitoring and sanctions (if required) to ensure the protection of the population's health.

Working Together

While there are five distinct public health strategies, in practice, they are inter-related and are often used together to address complex public and population health issues.

Example of Working Together:

Public Health and Reducing Chronic Disease in the Population

Population health assessment was used to determine what segments of the population are obese and experience chronic disease. It also looked at other determinants of health within the population that may be related to chronic disease, such as income and social status, geography, physical and social environments. **Health surveillance** was used to record obesity rates and associated long-term effects of obesity (e.g., diabetes, heart disease). **Disease prevention** strategies are offered to the population to encourage healthy eating where people live, work, learn and play. Through social marketing efforts and advocating for sodium reduction and the availability of nutrition information in restaurants, consumers can make the healthy choice the easy choice. **Health promotion** strategies such as policy and nutrition guidelines encourage healthy food environments in schools, recreation centres and public buildings. **Health protection** is also involved, through enforcing the trans fat regulation in all BC food service establishments.

Example of Health Protection

Everyone Needs Water

We use water for recreation, growing food, cleaning and nourishing our bodies. A vast majority of drinking water in BC is safe to drink right from the tap, thanks to proper treatment. But there are many communities throughout the province, particularly in rural and remote areas, that drink untreated water. This can be a problem if their source water is susceptible to contamination from pathogenic organisms, which is the case for all surface water (e.g., rivers, lakes, streams and springs) and some ground water. Drinking untreated, contaminated water could put you, your family and visitors at risk of getting sick.

The Drinking Water Program is administered locally by drinking water officers, public health engineers and medical health officers, who are responsible for direct service delivery in BC's health authorities. Drinking water officers provide surveillance and monitoring of drinking water systems that may affect the public's health. They also administer and enforce the Drinking Water Protection Act, the Drinking Water Protection Regulation and the Public Health Act, and provide interventions to minimize health and safety hazards. Drinking water officers and public health engineers are also the people who should be contacted prior to the creation or alteration of drinking water systems. Drinking water systems require construction permits and operating permits. This is to ensure that they are created and maintained to safeguard the drinking water supplied to customers.

Reflective Questions

- What are some examples of how you have used health surveillance information?
- What health promotion strategies have you seen in your community?
- Select a health issue. How could this health issue be addressed using the four stages of prevention (primordial, primary, secondary and tertiary)?

Module Highlights

- There are five public health strategies used by public health to maintain and improve the health status of populations, to reduce the existence of health disparities and to reduce costs associated with the health care system: population health assessment; health surveillance; health promotion; disease and injury prevention; and health protection.

Population Health Assessment – Monitors the health status of the population.

Health Surveillance – Detects, monitors and responds to outbreaks of disease or other health-related issues, and contributes to assessing the effectiveness of public health interventions.

Health Promotion – The process of enabling people to increase control over, and to improve their health. It employs a variety of approaches including building healthy public policy, creating environments that support health, strengthening community action, reorienting health services and building personal skills to achieve health and well-being.

Disease and Injury Prevention – Involves the development of strategies and the provision of interventions to prevent or delay the incidence of chronic disease and/or injury. Public health action occurs mainly in primordial and primary prevention, and sometimes secondary.

Health Protection – Strategies that protect populations from threats to their health. This is done through government legislation, regulation, inspection and, if need be, enforcement and prosecution.

Additional Resources

Health Promotion

Health Promotion Related Links

The Public Health Agency of Canada provides links to health promotion-related topics, including child health, healthy pregnancy and infancy, healthy living, mental health, family violence, physical activity, rural health, and seniors' health. Available at: <http://www.phac-aspc.gc.ca/hp-ps/index-eng.php>.

Health Promotion 101 Online Course

The Ontario Health Promotion Resource System has developed a free online health promotion course for health care providers. Available at: <http://www.ohprs.ca/hp101/main.htm>.

Disease and Injury Prevention

Healthy Families BC

An online resource for health and wellness information. Available at: <http://www.healthyfamiliesbc.ca>.

BC Injury Research and Prevention Unit Webinars

A series of webinars on a variety of topics. The webinars include evidence-based information and new research. The presentations are one hour long including some time for questions. Available at: <http://www.injuryresearch.bc.ca/bcirpu-webinars/>.

Health Protection

Infectious Diseases Related Links

The Public Health Agency of Canada provides links related to infectious diseases, and explores topics such as Anthrax, avian influenza and blood safety. Available at: <http://www.phac-aspc.gc.ca/id-mi/index-eng.php>.

Keeping Canadians Safe

Public Safety and Emergency Preparedness Canada provides links to emergency preparedness resources related to natural disasters, pandemic influenza and emergency management organizations. Available at: <http://www.publicsafety.gc.ca/prg/em/prprdnss-eng.aspx>.

Working Together

Public Health Impediments (BC Trans Fat) Regulation

Available at: http://www.bclaws.ca/Recon/document/ID/freeside/19_50_2009.

Glossary of Terms ^{a,4}

Community capacity	the individual and collective capacities that a community needs in order to be able to effectively address the primary determinants of health affecting the people in that place.
Health disparities	differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups.
Health impact	the interaction of a risk or intervention on one's health.
Health impact assessment	a combination of procedures, methods and tools by which a policy, program or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population.
Health status	the level of health of the individual, group, or population as subjectively assessed by the individual or by more objective measures.
Pandemic	an epidemic, usually caused by an infectious pathogen, which goes beyond national boundaries and extends over much of or the entire world, attacking people in all affected regions.
Prevention	actions focused on eliminating or minimizing the impact of disease and disability, or delaying the progress of disease and disability.
Primary prevention	prevents the onset of disease by changing health behaviours, reducing risk factors or enhancing the body's resistance to diseases. Primary prevention actions can occur at both the population and individual level (e.g., smoking cessation, vaccination). ⁵
Primordial prevention	targets the underlying health determinants by modifying social policies in order to improve health. Most primordial actions occur at the population level rather than at the individual level (e.g., sanitation, establishing healthy communities, economic reforms). ⁵
Secondary prevention	prevents the establishment or progression of a disease once a person has been exposed to it (e.g., screening program that detects disease at an early stage when intervention may be more cost-effective). ⁵
Surveillance	systematic and ongoing collection, collation, and analysis of health-related information that is communicated in a timely manner to all who need to know which health problems require action in their community. Surveillance is a central feature of epidemiological practice, where it is used to control disease.
Tertiary prevention	prevents the return of a disease that has been treated in its acute phase. It looks to limit the impact of the disease on the individual's quality of life (e.g., cardiac rehabilitation after a heart attack). ⁵

Endnotes

- a. Unless otherwise stated, definitions come from A Dictionary of Public Health, edited by JM Last (2007).
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Module 4

How is the Public Health System Organized in Canada?



Objective

Upon completion of Module 4, participants will understand:

- › How the public health system is organized.
- › The functions of the Population and Public Health Division and the Office of the Provincial Health Officer.
- › Public health governance.

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How is the Public Health System Organized in Canada?

In Canada, public health is a shared responsibility among the federal, provincial and territorial governments, and regional or local governments. One of the greatest challenges is to ensure that the roles and responsibilities among the various levels of government are clearly understood and carried out. This is essential to a seamless, integrated approach to achieving optimal population health and to managing public health emergencies.

General Organization/Roles

International Level

At the international level, the main public health body is the World Health Organization (WHO), a specialized agency of the United Nations, whose objective is the attainment by all peoples of the highest possible level of health. The WHO fulfills its objective through its core functions:

- Providing leadership on matters critical to health and engaging in partnerships where joint action is needed.
- Shaping the research agenda and stimulating the generation, translation and dissemination of valuable knowledge.
- Setting norms and standards and promoting and monitoring their implementation.
- Articulating ethical and evidence-based policy options.
- Providing technical support, catalysing change, and building sustainable institutional capacity.
- Monitoring the health situation and assessing health trends.

Federal Level

There are several organizations at the federal level that have responsibility for some aspects of public health, including international public health issues such as pandemics, food safety, environmental safety, regulation of hazardous and controlled substances, as well as regulation of drugs and health products. The federal government also oversees some population and public health services delivery, including services to First Nations communities, and inmates within the federal correctional system.

Public Health Agency of Canada

The Public Health Agency of Canada (PHAC) is the lead public health agency for the federal government. PHAC is led by a Chief Public Health Officer, who is responsible for public health legislation, programs and public health practice.

The role of the Public Health Agency of Canada is to:

- Promote health.
- Prevent and control chronic diseases and injuries.
- Prevent and control infectious diseases.
- Prepare for and respond to public health emergencies.

- Serve as a central point for sharing Canada's expertise with the rest of the world.
- Apply international research and development to Canada's public health programs.
- Strengthen intergovernmental collaboration on public health and facilitate national approaches to public health policy and planning.

Pan-Canadian Public Health Network

The Pan-Canadian Public Health Network (PHN) was established by Canada's Federal, Provincial and Territorial (F/P/T) Health Ministers in 2005, as a key intergovernmental mechanism to

- Strengthen and enhance Canada's public health capacity.
- Enable F/P/T governments to better work together on the day-to-day business of public health.
- Anticipate, prepare for, and respond to public health events and threats.

The PHN is a forum for public health experts from across Canada to come together, to raise and resolve issues, and to work collectively to strengthen public health in Canada. The PHN ensures that Canada is better prepared for future public health events by

- Fostering cooperative and collaborative approaches on public health matters.
- Establishing, maintaining and implementing instruments, initially in the form of collaborative public health strategies, formal inter-jurisdictional arrangements, and a framework for a common approach to public health legislation and regulation.
- Facilitating collaboration and mutual aid across jurisdictions during public health crises and urgent situations.
- Establishing consensus-based priorities to help governments focus and refine their public health investments and resources.
- Encouraging processes for developing, implementing, maintaining and updating standards, guidelines and best practices in the public health field.
- Negotiating arrangements that will govern intergovernmental collaboration in the day-to-day business of public health.
- Facilitating processes whereby applied research can be best translated into policies, programs and practice.
- Developing strong and robust public health partnerships between governments, academics, researchers, non-government organizations and health professionals.

Provincial/Territorial Level

From a constitutional perspective, public health services are primarily under the authority and funding operations of the provinces and territories. Thus, there are essentially 13 different ways that public health is carried out in Canada. The provincial and territorial governments provide funding and direction to their respective health authorities, departments or units. More information on how public health is carried out in BC will be discussed later in this module.

Regional/Local Level

Regional and/or local public health organizations are primarily responsible for health service delivery. There are four patterns of local governance in Canada:

Regional health authorities—the governance structure in BC—provide all health services within a defined geographical area.

Regional/District boards are responsible for public health and other community-based services in an area, but not for acute care (hospital or primary care services).

Local boards serve either single or multiple municipalities or counties for public health and some other community services (e.g., Ontario).

Provincially-delivered services, often for regions with smaller populations (e.g., the three Northern Territories).

British Columbia Context

Provincial Level

BC Ministry of Health

The Minister of Health “...has charge of all matters relating to public health....”² The Ministry of Health acts as the steward of BC’s health system. The ministry provides leadership, direction and support to its partners in the delivery of health services and sets province-wide goals, standards and expectations for the health system as a whole, and for those health services delivered by health authorities.

The ministry sets the overall strategic direction for the health system, provides a legislative and regulatory framework to allow it to function smoothly, and plans for the future supply and use of health professionals, technology and facilities. It has the responsibility to monitor the overall health of the population and plan for and coordinates responses to major public health risks and emergencies. It also evaluates the performance of the health system, and takes corrective action where necessary. Finally, the ministry leads and manages a few health programs that are not delivered by the health authorities (e.g., Medical Services Plan and PharmaCare).

Population and Public Health Division

The ministry’s Population and Public Health Division (PPH) is the focal point for the provincially coordinated and regionally delivered public health system. PPH focuses on improving the population’s overall health and well-being by promoting health; preventing disease, disability and injury; protecting the population from harm; and addressing inequities in health status in populations and sub-populations. The intent of these actions is to promote a healthier population, which may reduce current and future demands on the health system.

PPH business areas fulfill their work through stewardship by providing leadership and accountability for the public health system. PPH also develops legislation, regulations and policies;

develops programs and services based on evidence and best practice; advocates for healthy public policy; and partners with health authorities, other ministries, non-government organizations and civil society, in order to improve the health of British Columbians.

Office of the Provincial Health Officer

The Provincial Health Officer (PHO), a senior position in the Ministry of Health, is the senior public health officer for BC. The PHO is required by the *Public Health Act*¹ to monitor the health of British Columbians and provide information and analysis on health issues.

The responsibilities of the Office of the PHO are outlined in the *Public Health Act* and include

- Providing independent advice on health issues to the Minister and Ministry of Health.
- Reporting to British Columbians on the health of the population and other health issues.
- Recommending actions to improve health and wellness.
- Reporting on progress towards achieving BC's health goals.
- Working with the BC Centre for Disease Control and BC's medical health officers to fulfill their legislated mandates on disease control and health protection.

The PHO is required to report annually to British Columbians on their health status and on the need for policies and programs that will improve their health. The recommendations in these annual reports provide a road map for addressing specific issues and for strengthening BC's public health system. Annual reports can be issued on the general health status of the population or on specific topics of concern.

Other Provincial Ministries

In addition to the Ministry of Health, a number of other provincial ministries and agencies play roles critical to the health of British Columbians through legislation, responsibilities and services in areas such as education, housing, child welfare, social services, public safety, the environment, liquor control, business and finance.

Regional Level

Regional Health Authorities

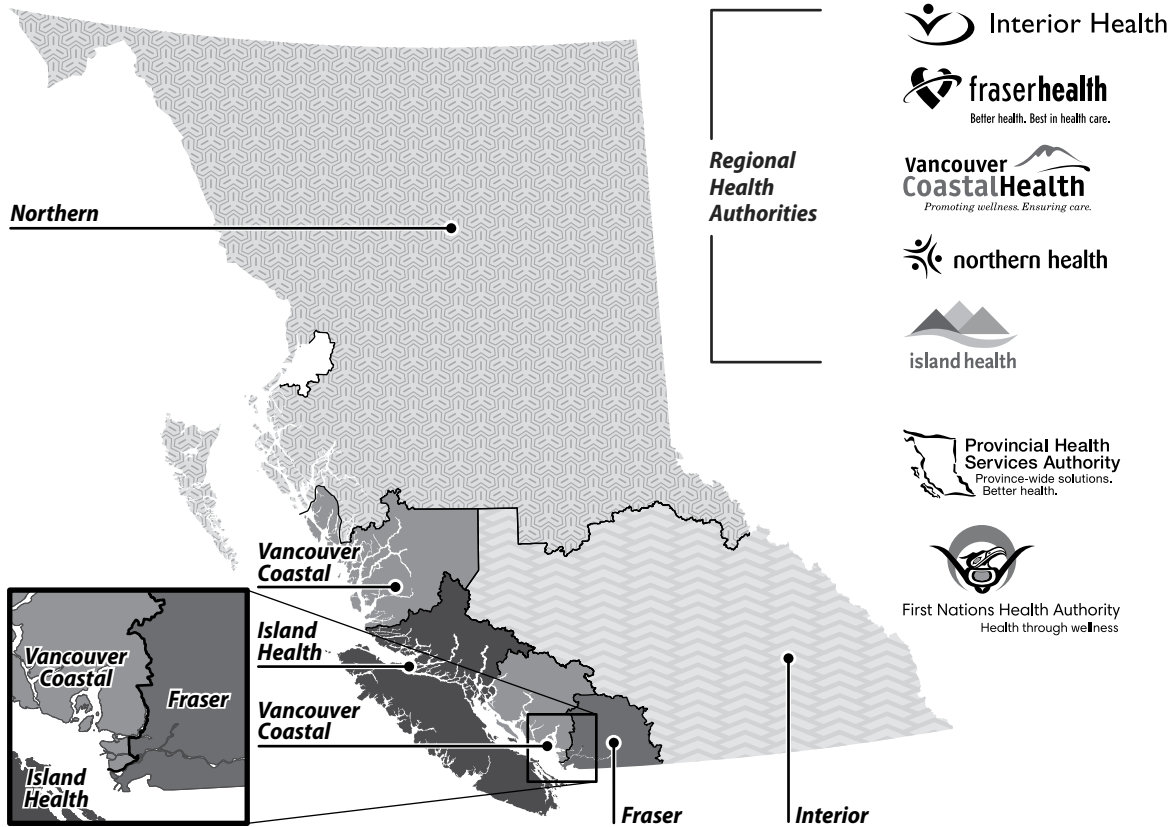
BC has five regional health authorities that serve the geographic regions of BC—Northern Health, Interior Health, Island Health (formerly Vancouver Island Health), Vancouver Coastal Health, and Fraser Health (see Figure 4.1).

Monitoring the Health of the Population: The Provincial Health Officer's Report on Women's Health and its Impact on Policy Development

In 2011, the Provincial Health Officer released an annual report that provided a summary of women's health in BC. It included information about reproductive health, life expectancy, chronic disease and injury, violence, mental health and substance use, and health services. The Provincial Health Officer made recommendations in this report to continue to improve women's health in BC, including developing a comprehensive strategy for women's health in BC. This recommendation prompted a response from the Ministry of Health, who in partnership with BC Women's Hospital and Health Centre and the BC Centre of Excellence for Women's Health, began working on a plan to renew a women's health strategy for BC.

The 2008 Provincial Health Officer's annual report focusing on women's health is available at <http://www.health.gov.bc.ca/pho/pdf/phoannual2008.pdf>

Figure 4.1: Health Authorities



The regional health authorities are responsible for:

- Identifying regional health care needs.
- Planning appropriate programs and services.
- Ensuring funding and appropriate management of these programs and services.
- Information gathering and data collection.

The five regional health authorities are responsible for delivering a full range of health services, including public health interventions (e.g., programs, services, policies) to meet the needs of the population within their respective regions. The health authorities govern, plan and coordinate services regionally, and are the main organizations responsible for local health service delivery.

The health authorities are responsible for providing the core public health programs of health improvement; prevention of disease, injury and illness; environmental health; and public health emergency management (see Module 6 for an overview of the core public health programs and the core functions framework).

Provincial Health Services Authority

A sixth health authority, the Provincial Health Services Authority (PHSA), is responsible for ensuring that BC residents have access to a coordinated network of high-quality specialized health care services. This includes selected services provided in facilities governed by other health authorities, as well as those programs and services provided through PHSA's nine agencies.⁴

The BC Centre for Disease Control (BCCDC) is the PHSA agency with public health functions. BCCDC provides provincial and national leadership in public health through surveillance, detection, treatment, prevention and consultation services. BCCDC investigates and evaluates the occurrence of communicable diseases in BC and is the provincial reporting centre for reportable cases and categories of communicable diseases. Integrated services within BCCDC operate to support the regional health authorities to provide the specialized services necessary to control communicable disease and promote environmental health in their regions.

First Nations Health Authority

In October 2011, the British Columbia Tripartite Framework Agreement on First Nation Health Governance was signed. Under the agreement, the Government of Canada agreed to transfer its programs and resources for First Nations Health in BC to a new First Nations Health Authority. October 1, 2013, marked the official transfer of Health Canada's First Nations Inuit Health Branch BC Region health services, programs, employees, and resources to the First Nations Health Authority.

Under the agreement, the five regional health authorities and PHSA will continue to provide acute (hospital) care to Aboriginal people, while the First Nations Health Authority (FNHA) will be responsible for on-reserve programs, including primary care and public health initiatives.

In addition to the FNHA, the First Nations health governance structure in BC includes the

- First Nations Health Council (FNHC): provides political leadership for implementation of Tripartite commitments, and supports health priorities for BC First Nations.
- First Nations Health Directors Association: composed of health directors and managers working in First Nations communities. Acts as a technical advisory body to the FNHC and the FNHA.
- Tripartite Committee on First Nations Health: the forum for coordinating and aligning programming and planning efforts between the FNHA, BC Regional and Provincial Health Authorities, the BC Ministry of Health, and Health Canada Partners.

First Nations Health Authority

The First Nations Health Authority (FNHA) is an organization created by the First Nations people of BC that seeks to improve the health status of BC First Nations through the transformation of the health system. It is the first of its kind in Canada. The primary mandate of the FNHA is to plan, design, manage, deliver and fund the delivery of First Nations health programs in BC. The FNHA evolved out of a bilateral agreement between the First Nations Health Council and the Province of British Columbia, and following this, a trilateral agreement that included the federal government. The FNHA aims to incorporate and promote First Nations knowledge, beliefs, values, practices, medicines and models of health and healing into the First Nations health programs, recognizing that these may be reflected differently in different regions of BC. To better meet health and wellness needs, the FNHA will, over time, modify and redesign health programs and services to replace federal health programs through a collaborative and transparent process with BC First Nations. This process will involve working with First Nations communities to address their needs and increasing collaboration between First Nations health providers.

Civil Society

Public health interventions are not limited to governments and health authorities. There are many non-government organizations, coalitions, networks and associations with a specific public health mandate (e.g., Clean Air Coalition, Pacific AIDS Network) or broad public health mandate (e.g., Public Health Association of BC) that play a significant public health role.

Reflective Questions

- In addition to the BC Ministry of Health, which other provincial ministries and agencies play roles critical to the health of British Columbians?
- Are you aware of an instance, issue, or crisis in Canada where the public health community was actively involved?
- How does civil society contribute to public health activities in your community?

Module Highlights

- Public health is a shared responsibility among international (World Health Organization), federal (Public Health Agency), provincial (Ministry of Health), and regional (health authorities) organizations.
- The public health system in BC includes the Ministry of Health, the Provincial Health Services Authority, the five regional health authorities (Vancouver Coastal, Fraser, Interior, Northern and Vancouver Island Health Authorities) and the First Nations Health Authority.
- The Ministry of Health sets overall direction for the health system, and plans for and provides the necessary infrastructure (i.e., legislation, human resources and information systems) for the system to function. The ministry sets province-wide goals, standards and expectations for health service delivery by health authorities and monitors and evaluates population health and health system performance.
- The province's health authorities are the organizations primarily responsible for health service delivery. Five regional health authorities deliver a full range of health services and activities to meet the needs of the population within their respective geographic regions. A sixth health authority, the Provincial Health Services Authority, is responsible for ensuring that BC residents have access to a coordinated network of high-quality specialized health care services.
- Under the British Columbia Tripartite Framework Agreement, the Government of Canada agreed to transfer its programs and resources for First Nations health in BC to a new First Nations Health Authority. Under this agreement, the five regional health authorities and PHSA will continue to provide acute care to Aboriginal people, while the First Nations Health Authority will be responsible for on-reserve programs, including primary care and public health initiatives.

Additional Resources

BC Tripartite Framework Agreement on First Nation Health Governance

Available at: http://www.hc-sc.gc.ca/fniah-spnia/alt_formats/pdf/pubs/services/tripartite/framework-accord-cadre-eng.pdf.

First Nations Health Authority

Includes information on the key functions of the FNHA, and on various First Nations health topics. Available at: <http://fnha.ca/>.

First Nations Health Council

Includes information on the key functions of the FNHC, and on various First Nations health topics. Available at: <http://www.fnhc.ca/index.php>.

First Nations Health Directors Association

Includes information on the key functions of the FNHDA, and on related news and events. Available at: <http://www.fnhda.ca/>.

Map of the Health Regions in BC

This map indicates the health regions and links to the webpage of each health authority. Available at: <http://www.health.gov.bc.ca/socsec/provmap.html>.

Provincial Health Services Authority

Includes information on services provided by PHSA's nine agencies. Available at: <http://www.phsa.ca/default.htm>.

Population and Public Health Division

Includes information on the key functions of the division and branches. Available at: <https://www.health.gov.bc.ca/division-pph/pph.html>.

Office of the Provincial Health Officer

Includes information on the responsibilities of the Office of the Provincial Health Officer and on various topics in public health. Also includes links to annual and special reports prepared by the Provincial Health Officer. Available at: <http://www.health.gov.bc.ca/pho/>.

Glossary of Terms

Constitutional perspective	principle that the authority of government derives from and is limited by a body of fundamental law.
Governance structure	mechanism that ensures alignment between business strategy and direction, and the path to needed outcomes over the life of the program.

Endnotes

- a The nine agencies of the PHSA are the BC Cancer Agency, BC Centre for Disease Control, BC Children's Hospital and Sunny Hill Health Centre for Children, BC Mental Health & Addiction Services, BC Renal Agency, BC Transplant, BC Women's Hospital & Health Centre, Cardiac Services BC, and Perinatal Services BC.
- 1. Public Health Act [SBC 2008], Chapter 28, Government of British Columbia, Victoria, BC.
- 2. Ministry of Health Act, [RSBC 1996], Chapter 301, Sec. 5.



Module 5

Public Health Renewal in Canada



Objective

Upon completion of Module 5, participants will understand:

- › What public health renewal is and why it is needed.
- › The key elements of an effective public health system.

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Ministry of
Health

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Why is Renewal Needed?

Individual citizens, communities, the business sector and governments all have an interest in improving health and preventing disease, injury and disability. While these and other partners have a stake in improving public health, a strong public health infrastructure is needed to protect and promote health and well-being. After Canada's public health experience with SARS in 2003, many experts demanded a renewal of the public health system in Canada. *Learning from SARS: Renewal of Public Health in Canada* (the Naylor report) was a call to action for public health renewal. The report stressed that "an effective public health system is essential to preserve and enhance the health status of Canadians, to reduce health disparities, and to reduce the costs of curative health services."¹

Key Elements of an Effective Public Health System: Canadian Institutes of Health Research Report

A 2003 report by the Canadian Institutes of Health Research (CIHR)² entitled *The Future of Public Health in Canada: Developing a Public Health System for the 21st Century*, recommended key elements for a national (and by extension a provincial) public health system:

- Clearly defined essential functions.
- Defined roles and responsibilities at each level.
- Consistent, modern legislation.
- Appropriate delivery structures.
- Appropriate funding levels.
- Appropriate numbers of well-trained staff.
- Information systems to support assessment and surveillance.
- Access to expertise and support.
- Accountability mechanisms.

The sections that follow will outline each element of an effective public health system, and where possible, give examples from the federal government perspective.⁴ Public health renewal in the BC context will be discussed in Module 6.

Clearly Defined Essential Functions

As stated in the CIHR report, "It is difficult to discuss, measure, and improve upon the public health system when the system and its functions are not defined."² Thus, it is critical to identify those functions, roles and tasks that are necessary to the effective operation of a public health system.

The 2003 CIHR report also noted that the logical next step after defining the essential functions was to identify those programs and services required to deliver those functions.

Defined Roles and Responsibilities at Each Level

In any system or organization, it is important to define roles and responsibilities, in order to reduce duplication and inefficiency and to ensure that the key functions are delivered. The 2003 CIHR report identified legislation as a key means to define the roles and responsibilities for a public health system, although

not the only method. For example, accountability mechanisms within the public health system, which are critical to provide the necessary linkages within the system and to ensure its smooth functioning, are often best addressed through policy documents and protocols that address specific issues, rather than through legislation.

Consistent, Modern Legislation

The 2003 CIHR report emphasized the need for a comprehensive public health system to have legislation (and related regulations) that is contemporary and responsive to the impacts of modern technology and societal needs.

Appropriate Delivery Structures

The 2003 CIHR report stressed that the ultimate success of a public health system depends on the capacity and effectiveness of regional/local public health agencies, as they are at the front-end of service delivery. In addition, the delivery of public health interventions often depends upon active partnership with a range of partners beyond the “governmental public health sector”, including other government sectors and non-governmental organizations; this is particularly so at the regional/local service delivery level.

Appropriate Funding Levels

The 2003 CIHR report highlighted the need for a more consistent and appropriate approach to the funding of public health. The report noted that many regional/local public health agencies lacked sufficient infrastructure and leadership to be effective and/or were of insufficient size to effectively and efficiently deliver public health interventions, and to attract and retain specialist public health professionals.

To mitigate these circumstances, public health agencies require sufficient, stable and predictable funding for the essential public health functions, particularly as many prevention programs require planning and implementation on a multi-year basis. In addition, there will always be a need to fund programs or projects to address specific issues. Funding of these special projects should be integrated within the overall public health system.

Appropriate Numbers of Well-trained Staff

In order to fulfil the essential functions of the public health system, public health agencies need a workforce with appropriate and constantly updated skills. Public health providers need to have and maintain public

Defined Roles and Responsibilities:

Public Health Agency of Canada

Created in 2004, the Public Health Agency of Canada (PHAC) provides national leadership on issues related to chronic disease and future infectious disease epidemics.

The deputy responsible for PHAC is the Chief Public Health Officer. The Chief Public Health Officer, who reports to the federal Minister of Health, is the federal government’s lead public health professional, providing advice to the Minister of Health and the federal government on health issues. This position manages PHAC’s day-to-day activities, works with other governments, jurisdictions and organizations on health matters, reports annually to the federal government on the state of public health in the country, and in a public health emergency leads the federal public health response.³

Pan-Canadian Public Health Network

The Pan-Canadian Public Health Network (PHN) is a network of people across Canada from many sectors and levels of government, who work together to strengthen public health in Canada.⁴

The PHN, created in 2005 by the federal/provincial/territorial (FPT) health ministers, is a mechanism to strengthen and enhance Canada’s public health capacity, enable FPT governments to work together on the day-to-day business of public health, and to anticipate, prepare for, and respond to public health events and threats.

The PHN takes a collaborative approach to public health that is critical not only during public health emergencies, but also in assisting jurisdictions to manage public health issues (e.g., chronic disease).

health competencies in order to provide programs and services. These core competencies are the essential knowledge, skills and attitudes required by all public health practitioners.

To bring a focus to public health human resources, the Public Health Agency of Canada established an Office of Public Health Practice, and the Pan-Canadian Public Health Network established a Public Health Human Resources Task Group (PHHRTG). The Office of Public Health Practice and the PHHRTG worked together to develop a number of documents to guide workforce development, including the document *Building the Public Health Workforce for the 21st Century: A Pan-Canadian Framework for Public Health Human Resources Planning*.⁵

In 2007, the Public Health Agency of Canada released *Core Competencies for Public Health in Canada: Release 1.0*,⁶ which defines seven categories of core competencies: public health sciences; assessment and analysis; policy and program planning, implementation and evaluation; partnerships, collaboration and advocacy; diversity and inclusiveness; communication; and leadership. These competencies are being used to inform undergraduate and graduate health education, as well as continuing professional development for the current public health workforce.

As stated by the Public Health Agency of Canada, the core competencies may improve the health of the public by:

- Contributing to a more effective workforce.
- Encouraging service delivery that is evidence-based, population focused, ethical, equitable, standardized and client-centered.
- Helping to create a more unified workforce by providing a shared understanding of key concepts and practices.
- Helping to explain the nature of public health and public health goals.⁶

In addition, core competencies can benefit the people who work in public health by

- Providing guidelines for the basic knowledge, skills and attitudes required by individual practitioners in public health.
- Supporting the recruitment, development and retention of public health practitioners.
- Providing a rational basis for developing curricula, training and professional assessment.
- Supporting the development of discipline and program-specific sets of competencies.⁶

Core Competencies For Public Health

Core competencies are the essential knowledge, skills and attitudes necessary for the practice of public health. They go beyond the boundaries of specific disciplines and are independent of program and topic. They provide the building blocks for effective public health practice, and the use of an overall public health approach.

In 2007, the Public Health Agency of Canada released Core Competencies for Public Health in Canada: Release 1.0.⁶ Public Health Sciences is one of the seven categories of core competencies identified in this document:

Public Health Sciences

This category includes key knowledge and critical thinking skills related to the public health sciences: behavioural and social sciences, biostatistics, epidemiology, environmental public health, demography, workplace health, and the prevention of chronic diseases, infectious diseases, psychosocial problems and injuries. Competency in this category requires the ability to apply knowledge in practice.

Information Systems to Support Assessment and Surveillance

Tools to support evidence-based best practice are a necessary component of an effective public health system. Information, data and communications systems help public health professionals monitor the health of populations, distribute resources to the right place and alert the public to health issues.

Equally important is the provision of integrated information and public health surveillance systems, to ensure timely exchange of information between and among laboratories and public health authorities. The 2003 CIHR report noted that at the time of writing, existing public health information systems were not uniformly designed to pass data between levels of responsibility (e.g., regional/local, provincial/territorial or federal), or from one system to another.

Access to Expertise and Support

Access to specialist public health expertise and best practice knowledge is critical for the delivery and support of the essential public health functions. However, as noted by the CIHR in their 2003 report, there are inequities in public health system capacity among different regions, provinces and territories.

When the federal government created the Public Health Agency of Canada in 2004, it also created a funding program to establish and support a network of National Collaborating Centres for Public Health across the country to promote and support the use of knowledge and evidence by public health practitioners and decision-makers in key areas of public health importance.

Accountability Mechanisms

The 2003 CIHR report noted that there was little information available on whether the public health system was fulfilling its essential functions, and suggested that a series of performance measures for each essential function be developed to provide this information. Performance measures could also be included for key infrastructure elements (e.g., workforce development). Such a process would allow for the ongoing identification of areas of system deficiency that require attention.

Information Systems to Support Assessment and Surveillance:

Public Health Information Systems (PANORAMA)

The Pan-Canadian Public Health Communicable Disease Surveillance and Management Information System (PANORAMA) is a response to a national recommendation to build a consistent, bilingual public health information system available to all Canadian jurisdictions. It gives authorized health care professionals throughout the country the ability to collect, share and analyze a wide range of health information that is critical to managing health issues such as communicable disease outbreaks or the implementation of a new immunization program.⁷

Access to Expertise and Support:

National Collaborating Centres

In 2004, the Prime Minister and First Ministers made a commitment to establish six National Collaborating Centres for Public Health, as part of a plan to strengthen the Canadian public health system. Between 2005 and 2006, these centres were established across Canada with topic-specific mandates: Aboriginal Health, Determinants of Health, Environmental Health, Infectious Diseases, Healthy Public Policy, and Methods and Tools. BC is home to two of the six centres: Aboriginal Health and Environmental Health.⁸

The centres allow the provincial level of the public health system to provide greater support to regions with less resident expertise, and to facilitate the distribution of knowledge and best practices. The centres also enable regional/local agencies to provide knowledge to other regions, based on frontline experience gained from program implementation and working with communities at the local level.

Reflective Questions

- In your view, which of the key elements of an effective public health system are most important at the national level, and why?
- Which of the Core Competencies for Public Health in Canada are most relevant to you?

Module Highlights

- Canada's public health experience with SARS in 2003 resulted in a demand for a renewal of the public health system in Canada.
- A 2003 report by the Canadian Institutes of Health Research (CIHR) entitled *The Future of Public Health in Canada: Developing a Public Health System for the 21st Century*, recommended nine key elements for a national and provincial public health system:

Clearly defined essential functions – it is critical to identify those functions, roles and tasks that are necessary to the effective operation of a public health system.

Defined roles and responsibilities at each level – it is important to define roles and responsibilities, in order to reduce duplication and inefficiency and to ensure that the key functions are delivered.

Consistent, modern legislation – a comprehensive public health system should have legislation that is contemporary and responsive to the impacts of modern technology and societal needs.

Appropriate delivery structures – service delivery needs to be structured effectively in order to accomplish functions, roles and responsibilities.

Appropriate funding levels – public health agencies require sufficient, stable and predictable funding for the essential public health functions, particularly as many prevention programs require planning and implementation on a multi-year basis.

Appropriate numbers of well-trained staff – to fulfil the essential functions of the public health system, public health agencies need a workforce with appropriate and constantly updated skills. Public health providers need to have and maintain public health competencies in order to provide programs and services. These core competencies are the essential knowledge, skills and attitudes required by all public health practitioners.

Information systems to support assessment and surveillance – tools to support evidence-based best practice are a necessary component of an effective public health system. Information, data and communications systems help public health professionals diagnose the health of populations, distribute resources to the right place and alert the public to health issues.

Access to expertise and support – access to specialist public health expertise and best practice knowledge is critical for the delivery and support of the essential public health functions.

Accountability mechanisms – performance measures for each essential function and key infrastructure elements allow for the ongoing identification of areas of system deficiency that require attention.

Additional Resources

Learning from SARS: Renewal of Public Health in Canada

This document provides the recommendations of the National Advisory Committee on SARS and Public Health for the renewal of public health in Canada.

Available at: <http://www.phac-aspc.gc.ca/publicat/sars-sras/pdf/sars-e.pdf>.

Improving Public Health System Infrastructure in Canada

In this report, the Strengthening Public Health System Infrastructure Task Group, a task group of the Federal/Provincial/Territorial Advisory Committee on Population Health and Health Security, offered recommendations for public health system renewal. Available at: http://www.phac-aspc.gc.ca/php-ppsp/pdf/improving_public_health_infrastructure_in_canada_e.pdf.

Pan Canadian Public Health Network

The Public Health Network assists governments and other public health partners in providing a high quality, efficient and responsive public health system for Canadians. A key to the Network's effectiveness lies in its connectedness: through the Public Health Network, partners are able to share knowledge and expertise, collaborate on shared priorities and strengthen the capacity of the system.

Core Competencies for Public Health

The Public Health Agency of Canada has developed core competencies for all public health practitioners. These have been adopted by the public health system in BC.

Available at: <http://www.phac-aspc.gc.ca/php-ppsp/ccph-cesp/pdfs/cc-manual-eng090407.pdf>.

Skills Enhancement for Public Health

The Public Health Agency's Skills Enhancement for Public Health has two initiatives that focus on strengthening public health capacity: Skills Online and Core Competencies for Public Health in Canada. Skills Online is an Internet-based continuing education program that aims to help public health practitioners develop and strengthen their knowledge and skills to meet the Core Competencies for Public Health in Canada.

For more information, see <http://www.phac-aspc.gc.ca/php-ppsp/ccph-cesp/index-eng.php>.

Building the Public Health Workforce for the 21st Century: A Pan Canadian Framework for Public Health Human Resources Planning – This document outlines the goals and a national framework for public health workforce planning. Available at: http://www.phac-aspc.gc.ca/php-ppsp/pdf/building_the_public_health_workforce_for_the_21st_e.pdf.

The Formation of the National Collaborating Centres

The National Collaborating Centres work to foster linkages, and each acts as a national focal point in a specialized area of public health. More information about the Collaborating Centres, their research and its application to public health practice is available at:

http://www.phac-aspc.gc.ca/media/nr-rp/2004/2004_01bk2-eng.php.

Glossary of Terms

Competencies	the acquisition of knowledge, skills and abilities at a level of expertise sufficient to be able to perform in an appropriate work setting.
Evidence-based best practice	making decisions about how to promote health or provide care by integrating the best available evidence with practitioner expertise and other resources, and with the characteristics, state, needs, values and preferences of those who will be affected.
Infrastructure	the basic, underlying framework or features of a system or organization.
Performance measures	a process for collecting and reporting information regarding the performance of an individual, group or organizations.

Endnotes

- a The sections of this module are modelled on the key elements outlined in the 2003 CIHR report. This reproduction is a copy of an official work that is published by the Government of Canada. The reproduction has not been produced in affiliation with, or with the endorsement of, the Government of Canada.
1. National Advisory Committee on SARS and Public Health. Learning from SARS: renewal of public health in Canada. Ottawa, ON: Health Canada; 2003 [cited 2012 Oct 9]. Available from: <http://www.phac-aspc.gc.ca/publicat/sars-sras/pdf/sars-e.pdf>.
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 3. Public Health Agency of Canada. Background [Internet]. Ottawa, ON: Public Health Agency of Canada; 2011 Jun 16 [cited 2012 Oct 25]. Available from: <http://www.phac-aspc.gc.ca/about-appropos/back-cont-eng.php>.
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Module 6

Public Health Renewal in BC



Objective

Upon completion of Module 6, participants will understand:

- The essential functions necessary for an effective public health system in BC.
- The objectives and goals of the Public Health Guiding Framework, which is the next phase of public health renewal in BC.

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Ministry of
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Public Health Renewal in BC

Having an effective, efficient and modern public health system in place is an important contributing factor for a healthy population. Public health has been and continues to be confronted by several challenges, including the following:

- A large and growing burden of chronic disease. Reducing that burden by preventing chronic disease and promoting health is important for those who may otherwise develop chronic disease; for their families, who may otherwise be devastated by the premature death or long-term disability of a loved one; for the health system, which otherwise will have to provide more treatment and care; and for society as a whole, which will have to pay for this, while suffering a significant loss of human potential.
- Significant outbreaks or threat of outbreaks of communicable disease. The outbreaks of SARS, West Nile disease and Avian Influenza in the first decade of the 21st century led to the recognition that Canada's system of public health was in trouble, under-funded and not as well organized as it should be.
- Changing environmental conditions that affect health (e.g., climate change, air and water pollution, effects of the built environment, etc.).

Like many other provinces, BC made a commitment to strengthen and renew its public health system and interventions at both the provincial and health authority level, and to improve the health of the population, so as to more effectively address these challenges.

As part of the renewal of the BC public health system, which began in 2003, clearly defined functions for BC were developed and summarized in the Core Functions Framework, and a new *Public Health Act* and related legislation were developed. The Core Functions Framework outlines a comprehensive set of public health services based on the best available evidence and best practices. The Core Functions Framework formed the foundation of BC's public health Guiding Framework (*Promote, Protect, Prevent: Our Health Begins Here. BC's Guiding Framework for Public Health*) and remains strategic policy direction for public health service delivery in the province.¹

Key Elements of an Effective Public Health System

As outlined in Module 5, the Canadian Institutes of Health Research report *The Future of Public Health in Canada: Developing a Public Health System for the 21st Century*,² recommended nine key elements for a national (and by extension a provincial) public health system:

- Clearly defined essential functions.
- Defined roles and responsibilities at each level.
- Consistent, modern legislation.
- Appropriate delivery structures.
- Appropriate funding levels.
- Appropriate numbers of well-trained staff.

- Information systems to support assessment and surveillance.
- Access to expertise and support.
- Accountability mechanisms.

These were adopted by the BC Ministry of Health in 2004 as the guidelines for public health renewal. The sections that follow will look at these elements and public health renewal in general, from a BC context. Table 6.1 outlines some of the initiatives undertaken in BC related to these nine key elements.

Table 6.1: Key Infrastructure Elements and Initiatives in BC

Key Infrastructure Elements	Initiatives
Defined Essential Functions	<ul style="list-style-type: none"> • Core Public Health Functions • Provincial-Level Core Functions
Defined Roles & Responsibilities	<ul style="list-style-type: none"> • Stewardship role of BC Ministry of Health • Role of regional health authorities and Provincial Health Services Authority • Role of First Nations Health Authority • Role of Provincial Health Officer and regional Medical Health Officers
Consistent, Modern Legislation	<ul style="list-style-type: none"> • <i>Public Health Act</i> • <i>Drinking Water Protection Act</i> • <i>Community Care and Assisted Living Act</i> • <i>Tobacco Sales Act Amendments</i> • <i>Tobacco Damages and Health Care Costs Recovery Act</i> • <i>Food Safety Act</i>
Appropriate Delivery Structures	<ul style="list-style-type: none"> • Regionalized health delivery system and unique role of the Provincial Health Services Authority • Creation of First Nations Health Authority • Cross-government and non-governmental organizations
Appropriate Funding Levels	<ul style="list-style-type: none"> • Strategically targeted investments to increase public health capacity
Appropriate Number of Trained Staff	<ul style="list-style-type: none"> • Public Health Human Resource Strategy • Public Health Core Competencies • Cultural Competency
Appropriate Information Systems	<ul style="list-style-type: none"> • Public Health Information System (Panorama)
Access to Expertise & Support	<ul style="list-style-type: none"> • Existing Expertise: BC Ministry of Health (Provincial Health Officer/Population & Public Health, Provincial Health Services Authority, BC Centre for Disease Control, Regional Health Authorities, First Nations Health Authority) • Public Health Academic Community • Public Health Agency of Canada and National Collaborating Centres

Key Infrastructure Elements	Initiatives
------------------------------------	--------------------

Accountability Mechanisms	
---------------------------	--

- | | |
|--|--|
| | <ul style="list-style-type: none">• Government Letters of Expectations• Service Plans and Balanced Scorecard• Routine monitoring• Operational Reviews• First Nations Health Plan• Provincial Health Officer's Reports• Directional Documents |
|--|--|
-

Clearly Defined Essential Functions

British Columbia began the process of determining the essential functions (termed core public health functions in BC) of a well-functioning public health system in 2003. The functions encompass the following elements:

- The development of a framework for Core Public Health Functions (core functions) for BC that clearly defines the essential public health functions. It defines and describes the strategies, programs and capacity/infrastructure of a comprehensive public health system.
- Based on this framework, the identification of a set of core programs and services informed by the evidence that all health authorities are expected to provide as they seek to improve the health of their population.
- The establishment of a performance improvement process for public health in health authorities.
- Targeted increases in funding for public health.
- The identification of a set of provincial-level functions needed to support public health interventions in BC.

The core functions in public health will be discussed in more detail in Module 7.

Defined Roles and Responsibilities at Each Level

In BC, there is a clear governance structure for public health that supports the development of public health strategies and allows public health issues to be addressed in a timely and strategic manner. This organizational structure utilizes the expertise of public health leaders in the province to carry out public health priority-setting and problem-solving within the health system and fosters positive population health outcomes across the province. For information on the roles and responsibilities of the Ministry of Health and health authorities see Module 4.

Consistent, Modern Legislation

As part of the modernization of its public health system, BC worked to provide public health legislation that is contemporary and responsive to societal needs. This modern approach to public health legislation includes provisions that are outcome-based and allow for innovative approaches and solutions. The BC public health statutes have been reviewed and amended to reflect

government's overall trend toward outcome-based legislation. The process of ensuring that the regulations under these statutes are updated and responsive to current needs is ongoing.

The development of the *Public Health Act* completed the modernization of key public health statutes in BC, which included updates to the *Food Safety Act*, the *Drinking Water Protection Act*, the *Community Care and Assisted Living Act*, the *Tobacco Damages and Health Care Costs Recovery Act*, and the *Tobacco Control Act*.

Consistent, Modern Legislation: Development of a New Public Health Act

The new Public Health Act replaced several pieces of legislation, including the Health Act, the Venereal Diseases Act and the Public Toilet Act, removing outdated provisions while strengthening the ministry's ability to monitor and prevent chronic disease. The development of the Public Health Act completed the modernization of key public health statutes in BC: the Food Safety Act, the Drinking Water Protection Act, the Community Care and Assisted Living Act and the Tobacco Control Act.

The updated Public Health Act supports health promotion and health protection by

- ▶ *Creating a modern legislative framework that establishes the powers, duties and functions of the minister and public health officials for public health monitoring and surveillance, communicable disease control, environmental health hazard response, chronic disease and injury prevention, and public health emergency response.*
- ▶ *Providing a legislative framework that is outcome-based to regulate operations, activities or conditions that could pose a health hazard or a threat to long-term population health.*
- ▶ *Strengthening relationships and clarifying local government responsibilities for public health.*
- ▶ *Enabling the minister to require specific plans to address public health issues.*
- ▶ *Enhancing public health information collection and analysis abilities.*
- ▶ *Broadening abilities to regulate health hazards and health impediments.*
- ▶ *Creating new powers to regulate operations, activities or conditions that could pose a health hazard or a threat to long-term population health.*
- ▶ *Introducing provisions that ensure administrative fairness.*
- ▶ *Strengthening relationships with, and clarifying responsibilities of, local governments regarding public health.*
- ▶ *Modernizing enforcement, sentencing and penalty provisions.*

Consistent, Modern Legislation:

Trans Fat Regulation

Trans fat comes in two forms: naturally occurring in meat or dairy products, and industrially produced, in oils, spreads and margarines and hidden in prepared foods like donuts, croissants and other baked goods. Trans fat increases a person's risk of coronary heart disease by raising levels of bad cholesterol and lowering levels of good cholesterol, leading to clogged arteries.³

In 2006, Health Canada endorsed recommendations of the federal Trans Fat Task Force to limit the trans fats in Canadian foods to 2% of total fat content in spreadable margarine, and to 5% of total fat content in all other foods, including ingredients sold to restaurants.⁴

In March 2009, the BC government implemented the BC Trans Fat Regulation under the Public Health Act. The first healthy eating regulation in Canada, it specifies that BC food establishments use oil and soft margarine that meets the restriction of 2% or less of total fat content, and all other food meets the 5% restriction. A 2010 evaluation found that a consultation process with stakeholders was helpful in the implementation. On average, 94% of food service establishments are compliant with the regulation according to the bi-annual Trans Fat Score Card (last update: October 2013).

Appropriate Delivery Structures

The 2003 CIHR report stressed that the ultimate success of a public health system depends on the capacity and effectiveness of regional/local public health agencies, as they are at the front-end of service delivery. A key role of the provincial government, through the Ministry of Health, is to ensure that the regional, provincial and First Nations health authorities have the ability to fulfill the core functions of the public health system.

Appropriate Funding Levels

The 2003 CIHR report highlighted the need for a more consistent and appropriate approach to the funding of public health. The report noted that many regional/local public health agencies across Canada lacked sufficient infrastructure and leadership to be effective and/or were of insufficient size to effectively and efficiently deliver public health services, and to attract and retain specialist public health professionals.

In BC, public health services are funded by the Ministry of Health, through the health authorities. The ministry is responsible for providing sufficient funding to ensure an adequate provision of core programs, and for ensuring an equitable distribution of funds to the health authorities, taking into account different geographic and demographic factors. Currently, public health funding is estimated to be 3 per cent of the total health budget.

Appropriate Numbers of Well-trained Staff

To manage and deliver the core public health functions, BC requires adequate numbers of appropriately trained public health practitioners with a wide range of knowledge and skills. Just over 3,000 people work in public health in BC. This includes frontline public health professionals (e.g., nurses, health inspectors, nutritionists, dental hygienists, and veterinary and laboratory scientists), consultants and specialists (e.g., epidemiologists, medical health officers, researchers, policy developers, lawyers), support staff (e.g., administrative, policy, information systems, contract), and managers.

Public health providers need to have and maintain public health competencies in order to fulfill public health core functions. Core competencies are the essential knowledge, skills and attitudes required by all public health practitioners. BC has adopted the federally developed core competencies.⁵ These competencies are being used to inform undergraduate and graduate health education, continuing professional development and performance management for the current public health workforce.

Appropriate Funding Levels:

Strategically Targeted Investments

Healthy Families BC, an initiative launched in 2011/12, is funded through a 10% realignment of public health funding. These realigned funds are being directed to new priorities that deliver public health services more effectively and efficiently, and that promote prevention rather than treatment.

Appropriate Numbers of Well-trained Staff:

BC Public Health Human Resources Strategy

BC has developed a public health human resources strategy based on the Pan-Canadian Framework for Public Health Human Resources Planning. The vision of the strategy is for BC to have a sufficient and competent workforce to implement core public health programs, in order to meet the public health needs of British Columbians. The strategy outlines a number of goals related to strategic planning, competency development, recruitment, retention and deployment, and organizational capacity.

Indigenous Cultural Competency Training

An indigenous cultural competency training program has been developed by the Provincial Health Services Authority of BC to increase Aboriginal-specific knowledge, enhance individual self-awareness and strengthen skills for any professional working directly or indirectly with Indigenous people.

Information Systems to Support Assessment and Surveillance

Tools to support evidence-based best practice are necessary to implement the core public health functions. Information, data and communications systems help public health professionals diagnose the health of populations; distribute vaccine resources based on need; and to alert the public to health issues.

Equally important is the provision of integrated information and public health surveillance systems, to ensure the timely exchange of information between and among laboratories and public health authorities.

The BC Yukon Public Health Information Project, part of the overall eHealth strategy for BC, has implemented a new information system for communicable disease control, immunization and family health that replaces the integrated Public Health Information System (iPHIS). This system, PANORAMA, is part of the national strategy to implement a set of interoperable communicable disease information systems.

Access to Expertise and Support

Access to specialist public health expertise and best practice knowledge is critical for the delivery and support of the core public health functions.

Centres and Agencies

BC is home to two of the National Collaborating Centres for Public Health established by the federal government: Aboriginal Health and Environmental Health. Each centre is mandated to promote and support the use of knowledge and evidence by public health practitioners and decision-makers in a key area of public health importance. (See Module 5 for more information on the National Collaborating Centres).

The BC Centre for Disease Control (BCCDC) and other agencies of the Provincial Health Services Authority are important sources of expert consultation for the health authorities, as are other provincial-level organizations including universities, other provincial agencies and the Ministry of Health. Public health staff in health authorities are also a source of expertise and advice.

Research

There is a clear need for more research across the entire spectrum of public health. Research is needed to assist in determining the overall functioning of the public health system, as well as specific public health core program areas.

BC has several research units that are fully or partially engaged in public health research, including the BCCDC and its various centres/units, the British Columbia Injury Research and Prevention Unit, the National Collaborating Centres on Aboriginal Health and

Information Systems to Support Assessment & Surveillance: Public Health Information Systems

A number of surveillance functions are required of a public health information system, including communicable disease prevention (e.g., immunization), communicable disease reporting and monitoring, maternal-child health and environmental health.

PANORAMA is a national information system being developed to support communicable disease prevention and control functions. BC is leading the development of a compatible component to PANORAMA to meet maternal-child health functions (i.e., maternal, infant and child screening and services).

Access to Expertise & Support: Core Public Health Functions Research Initiative

The Core Public Health Functions Research Initiative is a program of research focused on public health systems renewal in BC. This research involves a team of interdisciplinary academic researchers, and national, provincial and local public health knowledge users and practitioners. The overall goal of the initiative is to develop a research program, along with training opportunities, to study the impact and outcomes of the Core Functions Framework.

Environmental Health, the Centre for Addictions Research of BC at the University of Victoria, the Centre for Applied Research in Mental Health and Addiction at Simon Fraser University, as well as many individual academic and private researchers. There are a growing number of public health research funding opportunities at the federal level, principally through the Canadian Institutes of Health Research and the Public Health Agency of Canada.

Access to Expertise and Support – Research

The Nurse Family Partnership Program: An Evidence-based Practice

Sarah is an 18-year-old pregnant young woman living with her 20-year-old boyfriend and a couple of his friends in a 3-bedroom basement suite. Sarah is 15 weeks pregnant and this is her first pregnancy. She works part-time as a barista in a local coffee shop for minimum wage. Sarah quit school at the end of grade 10 and moved in with her grandmother for a few months after having another fight with her own mother, who has struggled with drug, alcohol and employment issues throughout Sarah's life. Sarah's physician recently referred Sarah to public health with Sarah's permission. The public health nurse called Sarah to let her know about public health services, including the opportunity to participate in a research project called BC Healthy Connections Project, which is the scientific evaluation of the Nurse-Family Partnership intervention in BC compared to existing services.

The Nurse-Family Partnership (NFP) program is an evidence-based program originally developed over 35 years ago in the United States. The program goals are to improve pregnancy outcomes, improve child health and development, and improve economic self-sufficiency. Three randomized controlled trials have been conducted that demonstrate program effectiveness in the United States. The program provides intense and frequent home visits (50-60 home visits) to young pregnant women, starting in pregnancy and continuing until the child is two years of age. The NFP public health nurses receive specialized education in the NFP model, which includes human ecology, attachment, and self-efficacy theory and the further development of skills in helping a client pursue their personal goals, be experts in their own lives, focus on their strengths, make small changes in their lives, and focus on solutions to their issues and challenges. The public health nurse develops a therapeutic and supportive relationship with the young first-time mother to help her manage and resolve issues and problems, so that she is then able to apply similar strategies to future situations. NFP nurses typically report that "this is the hardest job they have ever loved."

Sarah gave birth to a healthy baby boy and continued to work with her NFP nurse until program graduation when Liam turned 2. Sarah identified relationship and intimate partner violence issues that escalated in her pregnancy. She is now single and lives with her grandmother once again. Sarah is a loving and attentive parent and has a strong bond with Liam. Sarah's heart's desire was to become an aesthetician and she returned to school to accomplish her GED. She has applied to an aesthetician program and continues to work part-time while her grandmother and a local daycare continue to provide some child care for Liam.

Accountability Mechanisms

The 2003 CIHR report noted that there was little information available on whether the public health system was fulfilling its essential functions, and suggested that a series of performance measures for each essential function be developed to provide this information. Performance measures could also be included for key infrastructure elements (e.g., workforce development). Such a process would allow for the ongoing identification of areas of system deficiency that require attention.

In BC, standards for organizational competency can be seen in accreditation of health authorities and in the Government Letter of Expectations and Service Plan Agreements with the health authorities. The ministry, in collaboration with the health authorities, has developed a number of accountability mechanisms for monitoring and reporting on population and public health.

They include the following:

- Health Authority Service Plan reporting – health authority service plans are prepared by each health authority and outline budget management and health care planning strategies. These plans are the basis for ongoing discussions between the Ministry of Health and health authorities to ensure there is continuous improvement in the delivery of patient care and health services across the province.⁶
- Government Letter of Expectations – provides Government’s annual direction and is an agreement on the parties’ respective accountabilities, roles and responsibilities.
- Routine monitoring.
- Operational reviews.
- First Nations Health Plan.
- Directional documents/strategies.

Accountability Mechanisms: Performance Measures

Public health performance measures are more complex than those related to medical care for a variety of reasons:

- ▶ *The relationship between an intervention and a health outcome is often indirect.*
- ▶ *The period between an intervention and an outcome may be measured in years, or even decades.*
- ▶ *There are multiple factors in play at the same time, of which health-sector interventions—including public health interventions—are but one factor, and not necessarily the most important.*
- ▶ *The major determinants of population health (e.g., poverty, which has a broad effect on all dimensions of health) may be beyond the control of public health staff, health authorities, or even the Ministry of Health, so it may be hard to ascribe complete responsibility for outcomes to these stakeholders.*
- ▶ *There are usually multiple strategies that need to be deployed to address public health issues, and performance expectations could be anticipated for all of these interventions.*

As such, it may be difficult to attribute an outcome to an intervention, and it may be difficult to hold a health authority accountable for an outcome over which it has limited control or even influence.

Promote, Protect, Prevent: Our Health Begins Here. BC's Guiding Framework for Public Health

*Promote, Protect, Prevent: Our Health Begins Here. BC's Guiding Framework for Public Health*¹ (the Guiding Framework) was released in March 2013. The Guiding Framework aims to improve the health and wellness of British Columbians by

- Creating a long-term vision for the public health system, which incorporates all major public health strategies.
- Formalizing a collaborative process to identify future public health priorities.
- Reinforcing core public health functions as a foundation for public health services.
- Supporting a population health approach and the public health role in health equity.
- Connecting to and supporting primary care, clinical prevention and self-care.

The Guiding Framework is a 10-year directional document for the public health system. It unifies existing provincial resources and strategies that are in place to support public health and formalizes a collaborative process for identifying new priorities, making recommendations for strategic investments and increasing focus in key areas that contribute to health improvement.

Building on previous efforts for public health renewal in BC, the Guiding Framework reinforces core functions as the framework for public health service delivery in the province, provides a strong foundation for all current public health efforts, and builds on the critical elements necessary to consider when identifying future priorities.

The seven visionary goals of the plan build on this foundation:

Healthy Living & Healthy Communities – Supportive communities that make it easier for people to make healthy choices at every stage of life.

Maternal, Child & Family Health – Families have the capacity to achieve and maintain good health at all stages of child development.

Positive Mental Health & Prevention of Substance Harms – Optimal mental health and reduced harms associated with substances.

Communicable Disease Prevention – People living longer, higher quality lives free of preventable disease.

Injury Prevention – A safer province that reduces the risk of preventable injuries.

Environmental Health – Environments that optimize and support good health.

Public Health Emergency Management – Communities resilient to health emergencies.

These goals are the foundation for all public health efforts and form the basis of future strategic investments and priorities. The Guiding Framework also includes a broad set of strategic objectives under each goal that are tied to measurable 10-year targets. These will be the primary areas of focus for public health action and will inform decisions regarding future public health priorities over time.

Finally, one of the main aims of the Guiding Framework is to formalize a transparent and inclusive process to identify specific interventions that will support the vision and goals for the system (i.e., new and enhanced programs, what to keep doing, and possibly what to adjust/course correct). This identification process is intended to be proactive, ideally aligned with regular government budgeting and planning timeframes, and include key stakeholders—affording the best opportunity to ensure recommendations are based on evidence and can effect positive change within a sustainable public health and health care system.

Health authorities are the primary service delivery agents in the province; however, they rely on partnerships at the local and community levels in order to help implement, maintain or manage certain interventions. These partnerships provide the necessary support to address local priorities, expand reach and drive improvements in the health of communities and individuals throughout the province.

Reflective Questions

- Can you identify examples of public health legislation that affect you and your family?
- In your view, which of the key elements of an effective public health system are the most important in the BC context, and why?
- Which of the seven visionary goals of BC'S Guiding Framework for Public Health do you feel is the greatest priority?

Module Highlights

- Public health continues to face ongoing challenges such as the growing burden of chronic disease and outbreaks or threats of communicable disease.
- Like many other provinces, BC made a commitment to strengthen and renew its public health system and services at both the provincial and health authority level, and to improve the health of the population, so as to more effectively address these challenges.
- As part of the renewal of the BC public health system, which began in 2003
 - A new *Public Health Act* and related legislation were developed.
 - Clearly defined core public health functions were developed collaboratively by the ministry and health authorities. The core functions identify a comprehensive set of public health interventions, and are based on best available evidence and best practices.
- The Guiding Framework is the new directional document for the public health system and was released in 2013. The Guiding Framework reinforces core functions as the framework for public health service delivery, provides a long-term strategic vision for the public health system and lays out a process for collaboratively identifying public health priorities in order to achieve the 10-year goals and targets.

Additional Resources

Promote, Protect, Prevent: Our Health Begins Here. BC's Guiding Framework for Public Health (the Guiding Framework) <http://www.health.gov.bc.ca/library/publications/year/2013/BC-guiding-framework-for-public-health.pdf>.

Core Competencies for Public Health

The Public Health Agency of Canada has developed core competencies for all public health practitioners. These have been adopted by the public health system in BC.

Available at: <http://www.phac-aspc.gc.ca/php-ppsp/ccph-cesp/pdfs/cc-manual-eng090407.pdf>.

Skills Enhancement in Public Health

The Public Health Agency of Canada has developed online facilitated modules on a series of topics relevant to public health practice in Canada.

Available at: <http://www.phac-aspc.gc.ca/php-ppsp/ccph-cesp/index-eng.php>.

Indigenous Cultural Competency

The Provincial Health Services Authority has developed an online facilitated indigenous cultural competency program for health care providers.

Available at: <http://www.culturalcompetency.ca>.

Core Public Health Functions Research Initiative

A program of research focused on public health systems renewal in BC. For more information, see their website at <http://www.uvic.ca/research/groups/cphfri/>.

Glossary of Terms

- | | |
|-------------------------------------|--|
| Core competencies | the essential knowledge, skills and attitudes required by all public health practitioners. |
| Core public health functions | the essential functions of a public health system. |
| Outbreak | a small localized cluster of cases of a condition, usually an infectious disease. |
| Statutes | a law enacted by a legislature. |

Endnotes

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Module 7

Core Functions in Public Health



Objective

Upon completion of Module 7, participants will understand:

- The components of the Core Functions Framework.
- How the Core Functions Framework and tools support the implementation and accountability of the Guiding Framework.

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Ministry of
Health

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History

British Columbia began a comprehensive process of defining the essential functions (termed core public health functions in BC) of a well-functioning public health system in 2003. The functions encompassed these elements:

- The development of a **Core Functions Framework**, which represents policy direction to health authorities in terms of which public health programs should be offered, and to what effect.
- The establishment of a **performance improvement process** for health authorities for each of the core programs (later replaced with a focus on quality improvement for identified priorities and operational reviews of selected programs).
- Targeted increases in **funding for public health**.

These elements were incorporated in *Promote, Protect, Prevent: Our Health Begins Here. BC's Guiding Framework for Public Health*, and reinforced as the strategic direction for public health service delivery in the province. (See Module 6 for more information on the Guiding Framework).

Core Functions Framework

The Core Functions Framework was developed as part of public health renewal in BC to outline how the essential programs/services, strategies and infrastructure should be organized and implemented within BC's public health system. Health authorities are strongly encouraged to deliver all public health services outlined under the Core Functions Framework as they work to improve the health of their populations.

The Core Functions Framework (Figure 7.1) includes the following elements:

core programs – long term public health programs (mapped to the Guiding Framework goals), based on best available evidence, that health authorities are encouraged to provide as they seek to improve the health of their populations.

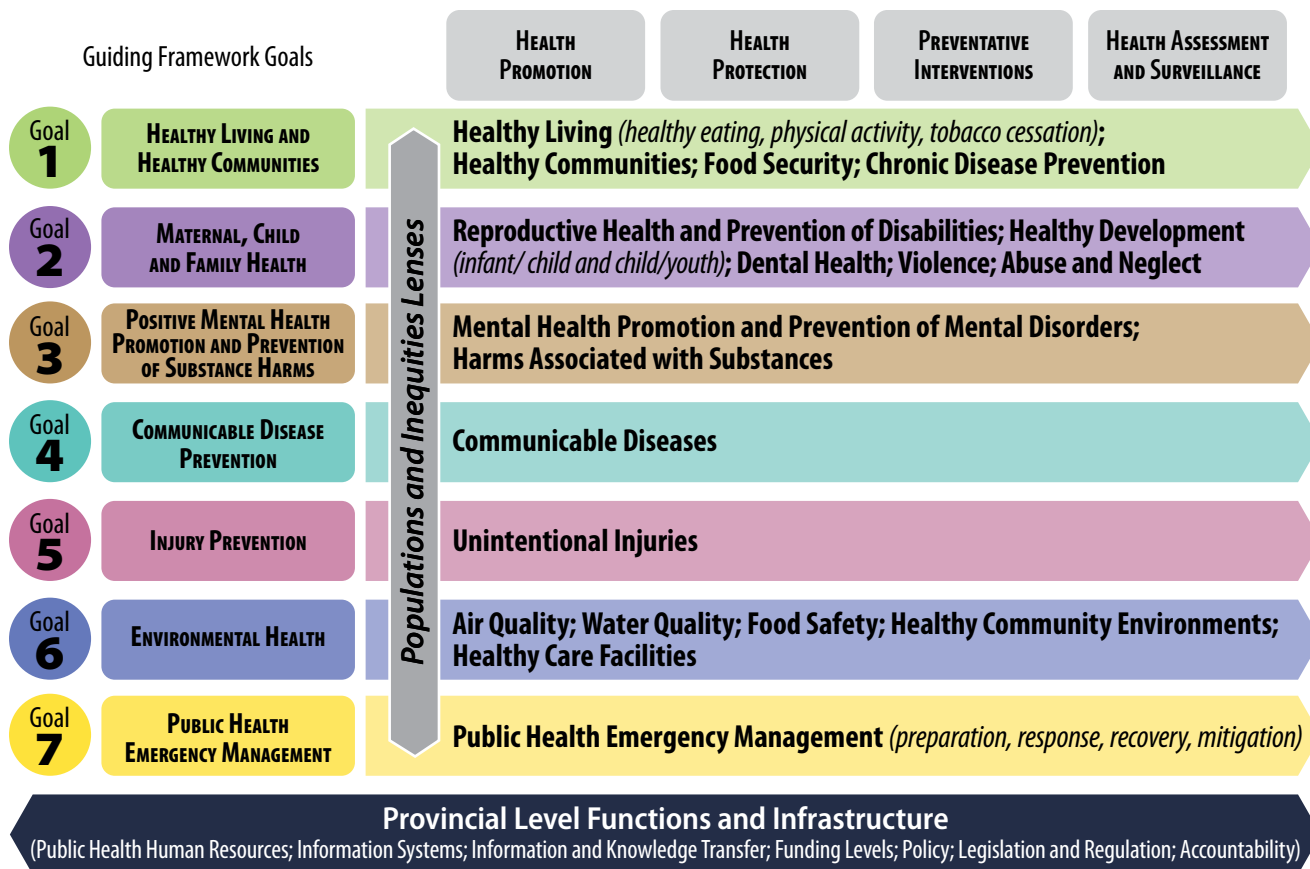
public health strategies – strategies that can be used to guide implementation.

population and inequities lenses – lenses applied across all core programs to ensure that populations of concern are a high priority.

provincial-level functions and infrastructure – system capacity elements required for success, such as human resources, health information systems and quality management.

All work aligns with the Guiding Framework and is supported by data/surveillance efforts under the Population and Public Health Surveillance Plan.

Figure 7.1 : Revised Core Functions Framework



Core Programs

Core programs are long-term, evidence-based programs that health authorities are encouraged to provide under a renewed and modern public health system. The decision on what constitutes a core program was made using the following set of criteria:

- They are primordial, primary or early secondary prevention interventions (see Module 3 for more information on the stages of prevention).
- They prevent diseases or conditions that are important contributors to the burden of disease, or they prevent diseases or conditions that are potentially important threats to health, or they improve the overall health and resilience of the population.
- There is reasonable evidence of their effectiveness and cost-effectiveness.
- Indicators are available or can be developed that will measure their impact.
- They fall within the mandate of the health authorities and/or the Ministry of Health.

The core programs have been mapped under the seven goal areas within the Guiding Framework to more explicitly demonstrate alignment and reinforce core public health programs as strategic policy direction for health authorities in the province.

As public health evolves, it is expected that the framework, and in particular the core programs, will evolve and change. For example, “ecological change” has been suggested as a new area under Environmental Health, as there is growing recognition that climate change, resource depletion, loss of biodiversity and other global and regional changes (declines) in “ecosystem health” pose very real threats to the health of the population.

Public Health Strategies

The Core Functions Framework outlines four strategies to maintain and improve the health status of populations, to reduce health inequities, and to reduce costs associated with the health care system. These strategies are used as a guide to implement core programs:

Health Promotion: Is the process of enabling people to increase control over, and to improve their health. It employs a variety of approaches that support health, strengthen community action, reorient health services and help improve personal skills to achieve health and well-being.

Health Protection: Strategies that protect populations from threats to their health.

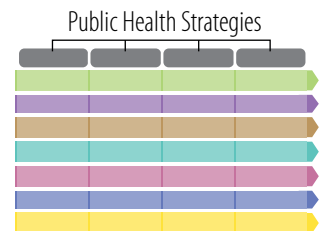
Preventive Interventions: Involve the development of strategies and the provision of interventions to prevent or delay the incidence of chronic disease and/or injury. Public health action occurs mainly in primordial and primary prevention, and sometimes secondary.

Health Assessment and Disease Surveillance: Monitors the health status of the population; detects, monitors and respond to outbreaks of disease or other health-related issues; and, contributes to assessing the effectiveness of public health interventions.

These public health strategies are interrelated, and are often used together to address complex population or public health issues (see Module 3, Working Together section for an example of how the strategies are interrelated). Use of these strategies rests on the capacity of the public health system.

Population and Inequalities Lenses

The population lens and the inequalities lens ensure the health needs of specific populations are addressed when implementing core programs. While some core programs should be universal (e.g., immunization, inspection of water and food, etc.), others should be preferentially or exclusively provided to selected populations that are at higher risk or are more vulnerable. BC’s Aboriginal population is a group that is of particular concern given the adverse impact of colonization and the resulting issues on their health and well-being.



Public Health Strategies:

Multiple Strategies to Reduce Tobacco Use

BC’s Tobacco Control Strategy uses a comprehensive approach, focusing on programs, taxation and legislation, to lower the tobacco use rate in BC. The strategy ranges from legislation that prohibits the sale of tobacco to youth, to the BC Smoking Cessation Program that offers BC residents free cessation medication, to smoke-free public and work spaces. As a result, BC has the lowest rate of tobacco use in Canada, and work continues to further reduce this rate.



One major challenge facing public health and its partners today is to reduce inequities in health. Action to reduce health inequities include both those within the realm of traditional public health interventions (e.g., identifying those experiencing inequity, enhancing provision of services or targeting services to them, reducing barriers to both reach and access, tailoring services, etc.) and those beyond the traditional jurisdiction of the health sector (e.g., partnering with others to improve child literacy, forming coalitions to address housing, supporting community development, advocating for improved conditions, etc.). (See Module 2 for more information on health inequities).

Inequity vs. Inequality

Inequity and inequality are closely related in origin and are frequently confused. Inequality refers primarily to the condition of being unequal, and it tends to relate to things that can be expressed in numbers (e.g., older people are less mobile [able to move] than younger people, so this is an inequality in the rate of mobility). Inequity, in its main sense, is a synonym of injustice and unfairness, so it usually relates to more qualitative matters. For example, in the situation above, if older people are less mobile because the physical environment they live in is unsafe and they cannot walk in their neighbourhood, or their income level is low and they only have enough money to buy food and no money available for recreation or aids to help them be active (e.g., canes or walkers) - i.e., things that are outside of their control and are amenable to change - the inequality is unjust or unfair and is considered an inequity.¹

Proportionate Universality

Promoting health equity and reducing health disparities requires more than just focusing on the most disadvantaged groups. Initiatives and strategies need to be universal, but with added scale or intensity for those experiencing short or long-term vulnerability. This approach is referred to as proportionate universality.

Public Health Role in Health Equity

Public health plays a critical and ongoing role in ensuring that protective factors, risk conditions and vulnerable populations are identified. Public health uses this information to design interventions, to inform decision-makers—both within and beyond the health system— and to support efforts to address the underlying causes of inequity.

Population and Inequalities Lenses: The Aboriginal Dental Health Program²

An example of an inequity in BC is the large gap between the oral health of the Aboriginal kindergarten population and the non-Aboriginal kindergarten population. A dental survey in 2009/2010 revealed that 28.5% of Aboriginal children had evidence of active dental decay, compared to 16.2% of non-Aboriginal kindergarten children. The health inequity was even more pronounced in First Nations schools on reserve, where 34.5% of kindergarten children had evidence of active dental decay. Dental decay, or caries, is an infectious, transmissible disease that children often acquire before age three. Caries in children can lead to pain, chewing problems and costly dental treatment requiring general anesthesia. Caries can affect school participation and self-esteem. Targeted efforts are underway to address oral health inequity among Aboriginal children and their families in BC.

A population health approach would consider approaches to reduce caries such as improving knowledge of the importance of baby teeth; promoting dental healthy snacks in preschools, day cares and school settings; promoting good oral health behaviours (e.g., use of fluoride toothpastes); addressing consumption of sugar-sweetened beverages; and developing provincially coordinated strategies to promote and monitor oral health; advocating for accessible and affordable treatment services.

Public health has the following roles with respect to reducing health inequities:

- Monitoring and reporting on health inequities.
- Ensuring that public health interventions are designed to support equitable health outcomes across population groups.
- Working actively with others in the health system to ensure that all health services are designed and delivered in a way that reduces health inequity.
- Working with other sectors to formulate policies and programs that will reduce health inequities.
- Collaborating with others beyond the health system to address the inequities among the broader environmental, social, economic and other determinants of health.

Provincial-level Functions and Infrastructure (System Capacity)

In addition to the core programs developed and implemented by the health authorities, there are provincial-level core public health functions. The ministry may be assisted in carrying out these functions by the Provincial Health Services Authority or relevant academic, non-governmental and other organizations, as appropriate.

The following provincial-level core functions were identified through discussions with health authorities, using the 2003 Canadian Institutes of Health Research report, *The Future of Public Health in Canada: Developing a Public Health System*,³ as a guide:

- Policy and Legislation.
- Public Health Human Resources.
- Information Systems.
- Organizational Competency/Accreditation.
- Public Communications/Advocacy.
- Evidence Reviews/Model Program Papers.
- Evaluation of Provincial Public Health Programs.
- Public Health Research & Evaluation.
- Links to National-level Functions.
- Health Assessment and Disease Surveillance.
- Funding Levels.
- Strategic Planning for Public Health.

Many of these functions are described in greater detail in Module 6.

Proportionate Universality

Seek and Treat for Optimal Prevention of HIV/AIDS

Seek and Treat for Optimal Prevention of HIV/AIDS program is a real world application of proportionate universality. A routine offer of HIV testing for all British Columbians entering acute and primary care is augmented by the added intensity of targeted testing strategies to vulnerable groups. A well-mapped client care pathway supports those well connected to the health system, in addition to more intensive support for vulnerable clients through peer navigators. Medication adherence is supported through pharmacy outreach for all who are on drug treatment, with the added intensity of a more targeted program to support medication adherence for vulnerable clients.

In order to have an effective public health system, appropriate infrastructure and capacity needs to be in place. These functions are inter-related and work together to support the broader system of public health. For example:

- A public health information system facilitates population health assessment and disease surveillance and provides data for monitoring and quality improvement of public health programs and services.
- Public health human resource development ensures that all public health staff have the core competencies to carry out core public health services. This requires programs to prepare public health professionals, to continue to educate and train staff, and to recruit and retain staff.
- Research and evaluation support public health innovation and are required to evaluate the effectiveness of public health programs. Such evaluation contributes to quality management.
- Evidence reviews complement the human resource skills and capacity to undertake policy analysis and development, and to propose, advocate for, and implement, policies in the health sector and beyond that will improve population health.
- Program planning and management capabilities are strengthened through information systems, evidence reviews and model core program papers, research and evaluation, and organizational competency.

Implementing the Guiding Framework

Service Planning, Delivery and Quality Improvement

Evidence reviews and model core program papers were developed as resources for the ministry and health authorities. The core programs were developed based on the evidence and best practices in public health.

An evidence review for each core program was done because

- It is important to know whether public health interventions are effective and do more good than harm.
- The benefits and costs of public health interventions should be described and evaluated so they can be weighed against other options for the use of resources.
- People who make evidence-based decisions about public health interventions should be aware of the strengths, limitations and gaps in the evidence.

Therefore, reviewing the evidence for core programs has several benefits for public health practice including the following:

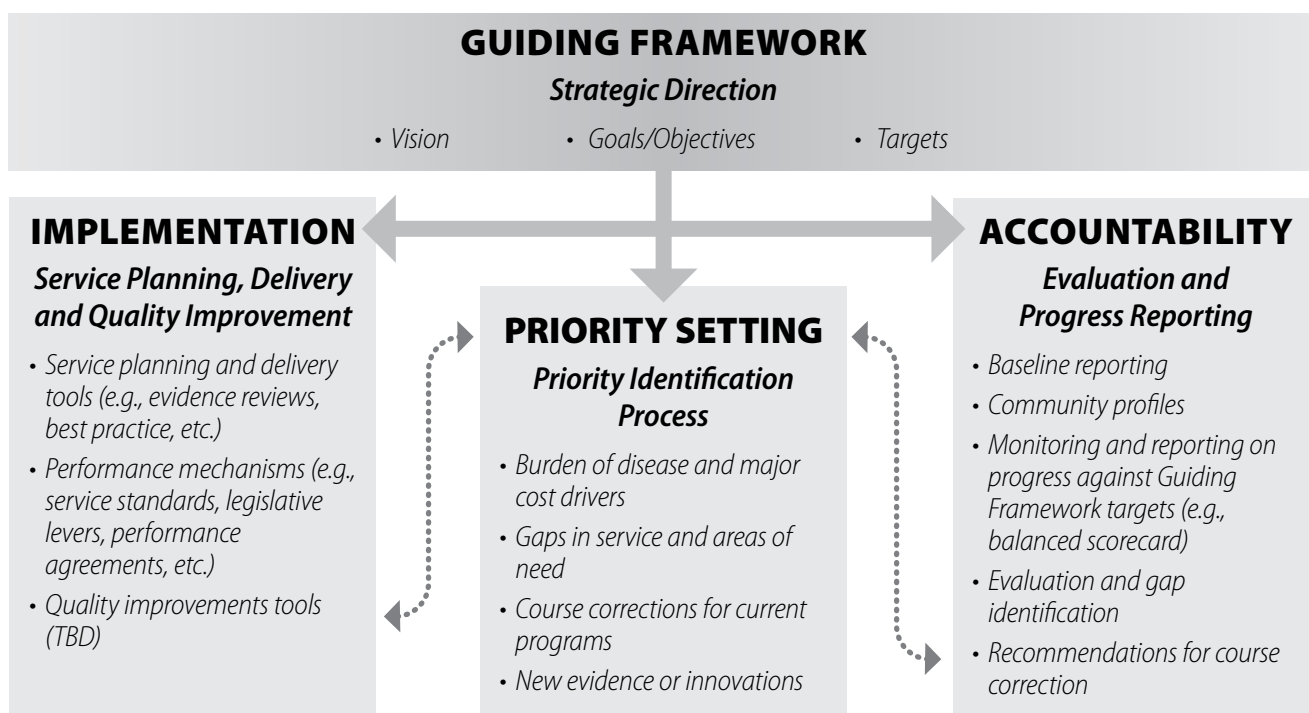
- Adoption of the most effective and cost-efficient interventions.
- Better health outcomes for individuals and communities.
- Prudent use of scarce resources.

Model core program papers, informed by the evidence, were then developed in collaboration with the health authorities. These model papers identify the core elements of a comprehensive program, including goals and objectives, principles, key components, and indicators and potential performance measures. The papers acknowledge that implementation of the model core programs may be influenced by other factors relevant to the population or environment, such as local context, community and political preferences and actions, and available public health resources.

It is expected that the ministry and health authorities will continue to use tools such as evidence reviews and model core program papers to help plan, design and deliver public health interventions. In this way they can apply the evidence to inform planning, policy development and delivery, and support ongoing quality improvement. Other performance management mechanisms, such as service standards, legislative levers or performance agreements, could be used to further ensure effectiveness and efficiency of public health service delivery.

These tools will be reviewed periodically and revised as necessary to ensure they best support service planning, delivery and quality improvement needs for implementing the Guiding Framework (see Figure 7.2).

Figure 7.2: Implementation and Accountability for the Guiding Framework



Evaluation and Progress Reporting

Another essential component of an effective public health system is the implementation of accountability mechanisms. The Population and Public Health Surveillance Plan will determine and fill key data needs in order to help health authorities identify the health status of their populations, monitor and report on progress against targets in the Guiding Framework, evaluate current public health programs, identify potential gaps and make recommendations for course correction.

Health authorities will be required to meet and report out on incremental targets towards Guiding Framework performance measures as a means of driving action and shifting health outcomes. This work is instrumental in improving effectiveness, performance measurement and accountability across the system.

Reflective Questions

- How would you describe the Core Functions Framework to your family and friends?
- How could you apply the Core Functions Framework to address current public health issues?
- Can you think of other tools that might be useful for quality improvement?

Module Highlights

- Public health continues to face ongoing challenges such as the growing burden of chronic disease and outbreaks or threats of communicable disease.
- The Core Functions Framework defines the essential functions and strategies that health authorities provide as they seek to improve the health of their populations. It forms the strategic policy direction for public health interventions in BC.
- Core programs are long-term programs that health authorities will provide in a renewed and modern public health system.
- There are 20 identified core programs mapped against seven goal areas in the Guiding Framework.
- The Core Functions Framework includes four strategies: health promotion; health protection; preventive interventions; and health assessment and disease surveillance. These strategies help maintain and improve the health status of populations, reduce health disparities, and help reduce costs associated with the health care system. They are used as a guide to implement the core programs.
- The population lens and the inequalities lens ensure the health needs of specific populations are addressed when implementing core programs.
- In addition to the core programs that will be developed and implemented by the health authorities, there are provincial-level core public health functions, which represent critical system capacity and infrastructure. The ministry may be assisted in carrying out these functions by the Provincial Health Services Authority or relevant academic, non-governmental and other organizations, as appropriate.
- Evidence reviews and model core program papers are resources that the Ministry has used as tools to plan, design and deliver core programs. These tools will be reviewed periodically to ensure they offer the best support for implementing the Guiding Framework.
- Accountability is another essential function of an effective public health system. The Population and Public Health Surveillance Plan will determine and fill in key data needs to support monitoring, evaluation and reporting against targets in the Guiding Framework.

Additional Resources

Guiding Framework and Core Functions Framework Online

The Guiding Framework, the Core Functions Framework and all resource documents are available on the Ministry of Health website at <http://www.health.gov.bc.ca/public-health/>.

An easy way to navigate the website is to use the site map or Quickfinder. The site describes the framework, provides the evidence, legislation, policy documents and model core programs papers for each of the core programs and links to other useful resources.

Glossary of Terms ^{a,4}

Biodiversity	the degree of variation of life forms within a given species, ecosystem or an entire planet. It is a measure of the health of ecosystems.
Burden of disease	the amount of ill health from a given cause (e.g., disease, injury, risk factor) in a population.
Colonization	invading and taking over control of another area, which then becomes known as a colony.
Core programs	long-term programs, representing the minimum level of public health services that health authorities would provide in a renewed and modern public health system.
Ecosystem	a complex set of relationships among the living resources, habitats, and residents of an area.
Health inequity	differences in health status or in the distribution of health determinants between different population groups.
Inequalities	the condition of being unequal. These inequalities relate to the effects of educational, housing, environmental and occupational factors, gender and ethnicity and to behavioural factors such as differences in exposure to cigarette smoking and other risk factors.
Prevention	actions focused on eliminating or minimizing the impact of disease and disability, or delaying the progress of disease and disability.
Primary prevention	prevents the onset of disease by changing health behaviours, reducing risk factors or enhancing the body's resistance to diseases. Primary prevention actions can occur at both the population and individual level (e.g., smoking cessation, vaccination). ⁵

Primordial prevention targets the underlying health determinants by modifying social policies in order to improve health. Most primordial actions occur at the population level rather than at the individual level (e.g., sanitation, establishing healthy communities, economic reforms).⁵

Secondary prevention prevents the establishment or progression of a disease once a person has been exposed to it (e.g., screening program that detects disease at an early stage when intervention may be more cost-effective).⁵

Tertiary prevention prevents the return of a disease that has been treated in its acute phase. It looks to limit the impact of the disease on the individual's quality of life (e.g., cardiac rehabilitation after a heart attack).⁵

Endnotes

- a Unless otherwise stated, definitions come from A Dictionary of Public Health, edited by JM Last (2007).
- Adapted from [Grammarist.com](http://grammarist.com). Inequality vs. inequity; [cited 2013 Jul 2]. Available from: <http://grammarist.com/usage/inequality-inequity/>.
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