

Population Health Assessment and Surveillance Protocol

Preamble

The Ontario Public Health Standards (OPHS) are published by the Minister of Health and Long-Term Care under the authority of the Health Protection and Promotion Act (HPPA)¹ to specify the mandatory health programs and services provided by boards of health. Protocols are program and topic specific documents which provide direction on how boards of health must operationalize specific requirement(s) identified within the OPHS. They are an important mechanism by which greater standardization is achieved in the province-wide implementation of public health programs.

Protocols identify the minimum expectations for public health programs and services. Boards of health have the authority to develop programs and services in excess of minimum requirements where required to address local needs. Boards of health are accountable for implementing the standards including those protocols that are incorporated into the standards.

Purpose

The purpose of this protocol is to provide direction on population health assessment and surveillance activities as defined in the OPHS so that local public health practice can effectively and efficiently identify and address current and evolving health issues. This protocol is intended to contribute to the maintenance and improvement of the health and well-being of the population, including the reduction of health inequities. This protocol requires boards of health to consider the determinants of health when identifying priority populations and using population health data and information to focus public health action. Implicit in this protocol are the principles of Partnership and Collaboration, Need, and Impact as outlined in the Foundations of the OPHS.

Reference to the Standards

The table below identifies the OPHS standards and requirements to which this protocol relates.

Standard	Requirement
Foundational	Requirement #1: The board of health shall assess current health status, health behaviours, preventive health practices, health care utilization relevant to public health, and demographic indicators in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).
	Requirement #2: The board of health shall assess trends and changes in local population health in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).
	Requirement #5: The board of health shall provide population health information including determinants of health and health inequities to the public, community partners, and health care providers, in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).
	Requirement #6: The board of health shall conduct surveillance, including the ongoing collection, collation, analysis, and periodic reporting of population health indicators, as required by the Health Protection and Promotion Act and in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).

Standard	Requirement
	<p>Requirement #7: The board of health shall interpret and use surveillance data to communicate information on risks to relevant audiences in accordance with the <i>Identification, Investigation and Management of Health Hazards Protocol, 2008</i> (or as current); the <i>Infectious Diseases Protocol, 2008</i> (or as current); the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current); the <i>Public Health Emergency Preparedness Protocol, 2008</i> (or as current); and the <i>Risk Assessment and Inspection of Facilities Protocol, 2008</i> (or as current).</p>
Chronic Disease Prevention	<p>Requirement #1: The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations, in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current), in the areas of:</p> <ul style="list-style-type: none"> • Healthy eating; • Healthy weights; • Comprehensive tobacco control*; • Physical activity; • Alcohol use; and • Exposure to ultraviolet radiation.
	<p>Requirement #2: The board of health shall monitor food affordability in accordance with the <i>Nutritious Food Basket Protocol, 2008</i> (or as current) and the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).</p>
	<p>Requirement #4: The board of health shall use a comprehensive health promotion approach to increase the capacity of workplaces to develop and implement healthy policies and programs, and to create or enhance supportive environments to address the following topics:</p> <ul style="list-style-type: none"> • Healthy eating; • Healthy weights; • Comprehensive tobacco control; • Physical activity; • Alcohol use; • Work stress; and • Exposure to ultraviolet radiation. <p>These efforts shall include:</p> <ol style="list-style-type: none"> a. Conducting a situational assessment in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current); and b. Reviewing, adapting, and/or providing behaviour change support resources and programs.
Prevention of Injury and Substance Misuse	<p>Requirement #1: The board of health shall conduct epidemiological analysis of surveillance data, including monitoring trends over time, emerging trends, and priority populations, in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current), in the areas of[†]:</p> <ul style="list-style-type: none"> • Alcohol and other substances; • Falls across the lifespan; • Road and off-road safety; and • Other areas of public health importance^{††} for the prevention of injuries.

* Comprehensive tobacco control includes preventing the initiation of tobacco use among young people; promoting quitting among young people and adults; eliminating non-smokers' exposure to environmental tobacco smoke; and identifying and eliminating disparities related to tobacco use and its societal outcomes among different population groups.

[†] The broad topic areas include alcohol and other substances (i.e., including alcohol misuse, drinking and driving, illicit substance use), falls across the lifespan (i.e., including falls in children, youth, adults, and older adults), and road and off-road safety (i.e., including motorized vehicles, pedestrians, cyclists, drivers, and occupants).

^{††} Other areas of public health importance related to prevention of injuries and substance misuse may include violence, suicide, burns, drowning, farm injuries, poisonings, scalds, suffocation, sport and recreation, and playground safety. The assessment, planning, delivery, and management for other areas of public health importance would be based on local epidemiology and evidence of effective interventions.

Standard	Requirement
	<p>Requirement #2: The board of health shall work with community partners, using a comprehensive health promotion approach, to influence the development and implementation of healthy policies and programs, and the creation or enhancement of safe and supportive environments that address the following:</p> <ul style="list-style-type: none"> • Alcohol and other substances; • Falls across the lifespan; • Road and off-road safety; and may include • Other areas of public health importance for the prevention of injuries as identified by local surveillance in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).
	<p>Requirement #4: The board of health shall increase public awareness of the prevention of injury and substance misuse in the following areas:</p> <ul style="list-style-type: none"> • Alcohol and other substances; • Falls across the lifespan; • Road and off-road safety; and may include • Other areas of public health importance for the prevention of injuries, as identified by local surveillance in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current). <p>These efforts shall include:</p> <ol style="list-style-type: none"> a. Adapting and/or supplementing national and provincial health communications strategies; and/or b. Developing and implementing regional/local communications strategies.
	<p>Requirement #5: The board of health shall use a comprehensive health promotion approach in collaboration with community partners, including enforcement agencies, to increase public awareness of and adoption of behaviours that are in accordance with current legislation[‡] related to the prevention of injury and substance misuse in the following areas:</p> <ul style="list-style-type: none"> • Alcohol and other substances; • Falls across the lifespan; • Road and off-road safety; and may include • Other areas of public health importance for the prevention of injuries as identified by local surveillance in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).
Reproductive Health	<p>Requirement #1: The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations, in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current) in the areas of:</p> <ul style="list-style-type: none"> • Preconception health; • Healthy pregnancies; • Reproductive health outcomes; and • Preparation for parenting.
	<p>Requirement #2: The board of health shall work with community partners, using a comprehensive health promotion approach, to influence the development and implementation of healthy policies and the creation or enhancement of supportive environments to address:</p> <ul style="list-style-type: none"> • Preconception health; • Healthy pregnancies; and • Preparation for parenting.
	<p>These efforts shall include:</p> <ol style="list-style-type: none"> a. Conducting a situational assessment in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current); and b. Reviewing, adapting, and/or providing behaviour change support resources and programs.[§]

[‡] Legislation includes municipal by-laws (e.g., community safety zones), provincial legislation (e.g., mandatory child car seats under the Highway Traffic Act), and federal legislation (e.g., ban on baby walkers under the Hazardous Products Act) that support prevention of injury and substance misuse.

[§] This could include, but is not limited to, curriculum support resources (in preschools, schools, etc.), workplace support resources, and education and skill-building opportunities, etc.

Standard	Requirement
Child Health	<p>Requirement #1: The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current), in the areas of:</p> <ul style="list-style-type: none"> • Positive parenting; • Breastfeeding; • Healthy family dynamics; • Healthy eating, healthy weights, and physical activity; • Growth and development; and • Oral health.
	<p>Requirement #2: The board of health shall conduct surveillance of children in schools and refer individuals who may be at risk of poor oral health outcomes in accordance with the <i>Oral Health Assessment and Surveillance Protocol, 2008</i> (or as current), and the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).</p>
	<p>Requirement #4: The board of health shall work with community partners, using a comprehensive health promotion approach, to influence the development and implementation of healthy policies and the creation or enhancement of supportive environments to address:</p> <ul style="list-style-type: none"> • Positive parenting; • Breastfeeding; • Healthy family dynamics; • Healthy eating, healthy weights, and physical activity; • Growth and development; and • Oral health.
	<p>These efforts shall include:</p> <ol style="list-style-type: none"> a. Conducting a situational assessment in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current); and b. Reviewing, adapting, and/or providing behaviour change support resources and programs.[§]
Infectious Diseases Prevention and Control	<p>Requirement #2: The board of health shall conduct surveillance of:</p> <ul style="list-style-type: none"> • Infectious diseases of public health importance, their associated risk factors, and emerging trends; and • Infection prevention and control practices of inspected premises associated with risk of infectious diseases of public health importance <p>in accordance with the <i>Infectious Diseases Protocol, 2008</i> (or as current) and the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).</p>
	<p>Requirement #3: The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations, in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).</p>
Rabies Prevention and Control	<p>Requirement #3: The board of health shall conduct surveillance of rabies in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current) and the <i>Rabies Prevention and Control Protocol, 2008</i> (or as current).</p>
	<p>Requirement #4: The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations, in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).</p>

[§] This could include, but is not limited to, curriculum support resources (in preschools, schools, etc.), workplace support resources, and education and skill-building opportunities, etc.

Standard	Requirement
Sexual Health, Sexually Transmitted Infections, and Blood-Borne Infections (including HIV)	<p>Requirement #2: The board of health shall conduct surveillance of:</p> <ul style="list-style-type: none"> • Sexually transmitted infections; • Blood-borne infections; • Reproductive outcomes; • Risk behaviours; and • Distribution of harm reduction materials/equipment <p>in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current) and the <i>Sexual Health and Sexually Transmitted Infections Prevention and Control Protocol, 2008</i> (or as current).</p>
	<p>Requirement #3: The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations, in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).</p>
Tuberculosis Prevention and Control	<p>Requirement #2: The board of health shall conduct surveillance of active tuberculosis as well as individuals with LTBI in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current) and the <i>Tuberculosis Prevention and Control Protocol, 2008</i> (or as current).</p>
	<p>Requirement #3: The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations,[#] in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).</p>
Vaccine-Preventable Diseases	<p>Requirement #2: The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations, in accordance with the <i>Infectious Diseases Protocol, 2008</i> (or as current) and the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).</p>
Food Safety	<p>Requirement #1: The board of health shall conduct surveillance of:</p> <ul style="list-style-type: none"> • Suspected and confirmed food-borne illnesses; and • Food premises <p>in accordance with the <i>Food Safety Protocol, 2008</i> (or as current) and the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).</p>
	<p>Requirement #2: The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations, in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).</p>
Safe Water	<p>Requirement #2: The board of health shall conduct surveillance of drinking-water systems and of drinking water illnesses of public health importance, their associated risk factors, and emerging trends in accordance with the <i>Drinking Water Protocol, 2008</i> (or as current); the <i>Infectious Diseases Protocol, 2008</i> (or as current); and the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).</p>
	<p>Requirement #4: The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations, in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).</p>
Health Hazard Prevention and Management	<p>Requirement #1: The board of health shall conduct surveillance of the environmental health status of the community in accordance with the <i>Identification, Investigation and Management of Health Hazards Protocol, 2008</i> (or as current); the <i>Infectious Diseases Protocol, 2008</i> (or as current); the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current); the <i>Public Health Emergency Preparedness Protocol 2008</i> (or as current); and the <i>Risk Assessment and Inspection of Facilities Protocol, 2008</i> (or as current).</p>

[#] For the purpose of this standard, priority populations may include but are not limited to those incarcerated in correctional facilities, Aboriginal peoples and First Nation communities, refugees, recent arrivals to Canada, homeless persons, and those who work closely with these groups.

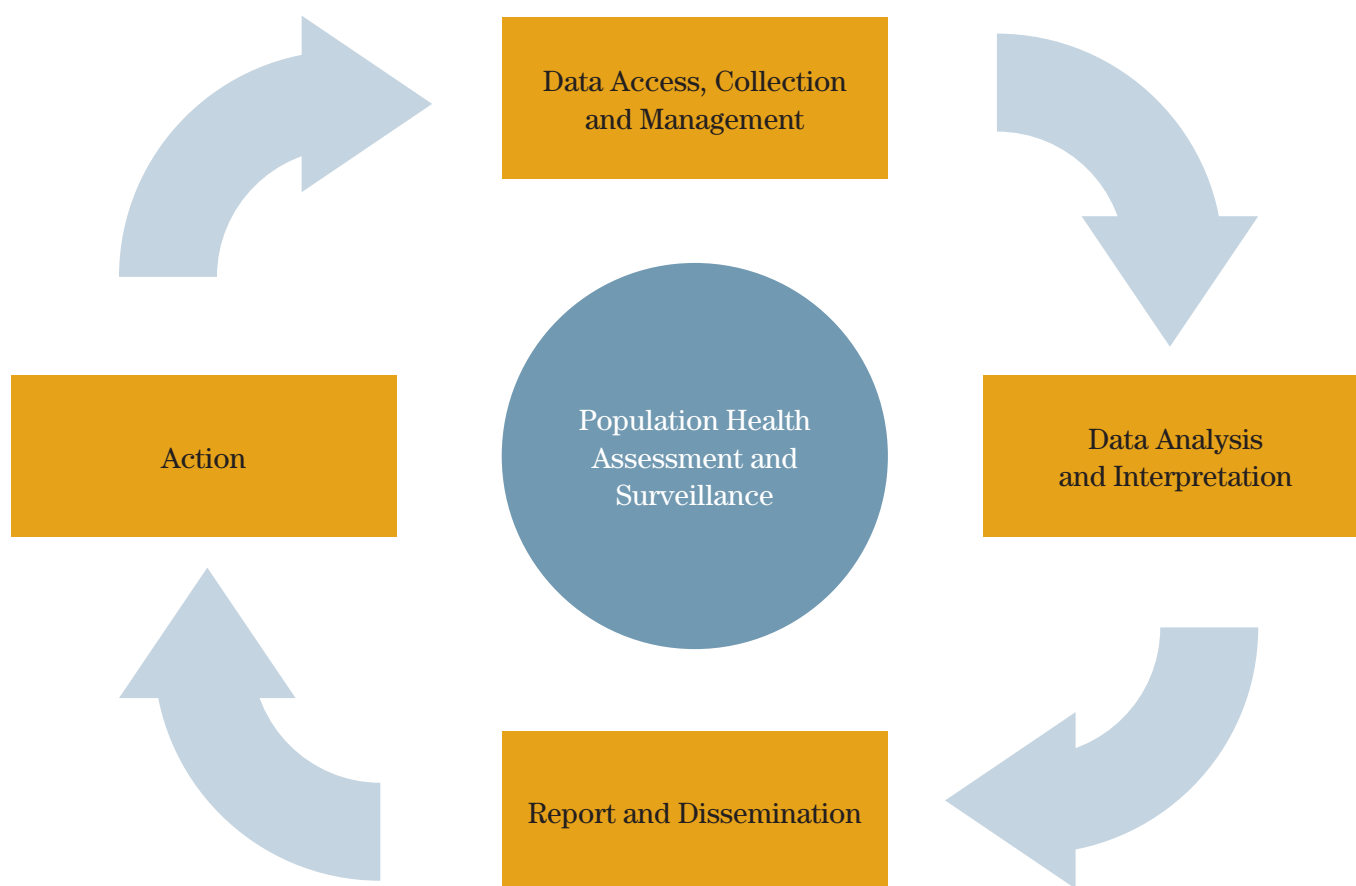
Standard	Requirement
	Requirement #2: The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations, in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current).
Public Health Emergency Preparedness	Requirement #1: The board of health shall identify and assess the relevant hazards and risks to the public's health in accordance with the <i>Identification, Investigation and Management of Health Hazards Protocol, 2008</i> (or as current); the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current); and the <i>Public Health Emergency Preparedness Protocol, 2008</i> (or as current).

Operational Roles and Responsibilities

The population health assessment and surveillance cycle

Population health assessment and surveillance entails data access, collection, and management; data analysis and interpretation; reporting and dissemination; and action. Figure 1 illustrates the most common and continuous flow of population health assessment and surveillance information. As population health data and information are analyzed and interpreted, resulting actions may: have direct impact on the provision of public health programs and services; validate action already taken; or result in the collection of additional data to address new questions and issues. The interplay among these process components is iterative, cyclical, and dynamic.

Figure 1: Population health assessment and surveillance cycle



1) Data Access, collection and management

- a) The board of health shall access, collect, manage, and use data and information from multiple sources in order to undertake population health assessment and surveillance. This shall include quantitative and qualitative data and information obtained through the following sources or methods, depending on the issue:
 - i) Public health information systems, including but not limited to the integrated Public Health Information System (iPHIS), the Immunization Records Information System (IRIS), the Integrated Services for Children Information System (ISCIS), the Oral Health Information Support System (OHISS), and any other methods that collect health assessment and surveillance data as may be specified by the Ministry of Health and Long-Term Care, Ministry of Health Promotion or Ministry of Children and Youth Services;
 - ii) Administrative databases for which the primary purpose is not health assessment and surveillance;
 - iii) Surveys;
 - iv) Literature (peer-reviewed and/or other “grey” literature);
 - v) Policy and program documentation, including evaluation; and
 - vi) Other primary data collection (qualitative or quantitative), as well as data and information from other local, regional, provincial, and national sources.

- b) The board of health shall collect or access the following types of population health data and information:
 - i) Socio-demographics including population counts by age, sex, education, employment, income, housing, language, immigration, culture, ability/disability, and cost of a nutritious food basket;
 - ii) Mortality, including death by cause;
 - iii) Morbidity, including incidence of reportable diseases, surveillance of other infectious diseases of public health importance, incidence of injury as assessed by in-patient hospitalizations and emergency department visits, and prevalence of chronic diseases;
 - iv) Reproductive outcomes including live births, stillbirths, pregnancy, birth weight, multiple births, gestational age, and congenital anomalies;
 - v) Growth and development;
 - vi) Risk factors including tobacco use, exposure to ultraviolet radiation, use of alcohol and other substances, work stress, food-handling practices, and infection prevention and control practices of inspected premises associated with risk of infectious diseases of public health importance;
 - vii) Preventive health practices including immunization, oral health, physical activity, healthy eating, healthy weights, road and off-road safety, cancer screening, sexual practices, breastfeeding, preconception health, healthy pregnancies, preparation for parenting, positive parenting, and healthy family dynamics;
 - viii) Physical environment factors; and
 - ix) Other relevant data and information regarding: attitudes, awareness, and knowledge; public health policies, programs and services; the legal and political environment; stakeholder perspectives; and program evaluation.

- c) The board of health shall use standard definitions of variables and health indicators, where available and appropriate, to collect and access population health data and information. The Association of Public Health Epidemiologists in Ontario (APHEO), Statistics Canada, and the Canadian Institute for Health Information provide standard definitions for population health assessment and surveillance indicators which shall be used where available.

- d) The board of health shall adopt, adapt, or develop techniques, tools, and/or systems for the collection, management, and integration of population health data and information.

- e) The board of health shall employ rigorous and sound methods in accessing, collecting, and managing population health data and information. This includes using appropriate sampling and reducing potential sources of bias and error to optimize data quality.

2) Data analysis and interpretation

- a) The board of health shall undertake monitoring, analysis, and interpretation of population health data and information on a systematic and timely basis. The timing and frequency of analysis and interpretation shall be determined by the following factors: patterns of exposure or outcome occurrence (including intervals within which meaningful change is detectable), likelihood and/or possibility of change, the availability of data, the urgency of required action, and the consequences of decision-making.
- b) The board of health shall analyze population health data and interpret the information to describe the distribution of health outcomes, preventive health practices, risk factors, determinants of health, and other relevant information to assess the overall health of its population.
- c) The board of health shall make comparisons by person, place, and time and consider the relationships among these elements:
 - i) **Person:** This includes analysis by socio-demographic variables and can be used to determine who is at risk;
 - ii) **Place:** This includes analysis of health unit data and how data are spatially distributed. Geographic comparisons may be limited by the data available. As such, comparisons within and among other health units and the province should also be undertaken when applicable; and
 - iii) **Time, including trends:** This includes analysis of population health data and information for any given point in time, as well as across time periods.
- d) The board of health shall use standard definitions of variables and health indicators, where available and appropriate, to conduct data analysis and interpretation of population health data and information. The APHEO, Statistics Canada, and the Canadian Institute for Health Information provide standard definitions for population health assessment and surveillance indicators which shall be used where available.
- e) The board of health shall, when analyzing health data and information:
 - i) Use quantitative and qualitative methods of data analysis as appropriate to the issue;
 - ii) Define the population of interest to determine inclusion and exclusion criteria for analysis;
 - iii) Document and provide analysis details, including data sources, methods, assumptions, indicator definitions, and data limitations; and
 - iv) Use the most currently available data to describe the health status of the population as appropriate.
- f) The board of health shall integrate data from multiple sources, as appropriate, and consider the relationships among the information gathered in order to make recommendations for program planning and decision-making. It shall exercise sound judgment and apply responsible decision-making processes to analyze and interpret health data and information.
- g) The board of health shall synthesize data and information into a situational assessment as required. A situational assessment includes, but is not limited to the use of the following types and sources of information:
 - i) Key facts, findings, trends, and recommendations from the literature;
 - ii) Data and analyses obtained from population health assessment and surveillance;
 - iii) Legal and political environments;
 - iv) Stakeholder perspectives; and
 - v) Recommendations based on past experiences, including program evaluation information.
- h) The board of health shall identify priority populations to address the determinants of health, by considering those with health inequities including: increased burden of illness; or increased risk for adverse health outcome(s); and/or those who may experience barriers in accessing public health or other health services or who would benefit from public health action. The board of health shall use the following to identify priority populations:
 - i) Socio-demographic and geographic characteristics of the health unit;
 - ii) Interpretation of existing and/or acquired data and information that describe the relationship between the barriers and specific program requirements (e.g., relationship between age or education and reproductive outcomes; immigration status and tobacco use, etc.); and
 - iii) Program evaluation data and information which identifies program benefits and gaps for diverse populations.

3) Reporting and dissemination

- a) The board of health shall develop and maintain a locally appropriate plan for reporting and dissemination that identifies:
 - i) The characteristics of the data and information;
 - ii) The intended audiences;
 - iii) The frequency with which reporting will take place; and
 - iv) The format in which the information will be reported (e.g., internal fact sheet; health status report; etc.).
- b) The board of health shall produce information products to communicate population health assessment and surveillance results. An information product can range in depth and breadth from an e-mail or a summary sheet with brief highlights to a comprehensive report. Information products shall:
 - i) Be understandable and useable by the intended audience(s); and
 - ii) Be timely in terms of issues, policy-making cycles, and seasonality to maximize visibility and impact.
- c) The board of health shall distribute/make available population health assessment and surveillance information products as appropriate to:
 - i) Public health professionals/practitioners and policy- and decision-makers:
 - Among board of health staff;
 - Between boards of health and government (local, provincial and/or federal); and
 - Across the broader health system (e.g., health care providers, hospitals, long-term care homes);
 - ii) Community partners (e.g., social service agencies, education facilities, non-government agencies); and
 - iii) The general public.
- d) The board of health shall disseminate information products at a timing and frequency determined by the following factors: patterns of exposure or outcome occurrence (including intervals within which meaningful change is detectable), likelihood and/or possibility of change, availability of data, and the urgency of required action.

4) Action

- a) The board of health shall use population health assessment and surveillance data and information to:
 - i) Identify options for action, including but not limited to:
 - Continuation of existing policies, programs, or interventions;
 - Modification of existing policies, programs, or interventions;
 - Creation of new policies, programs, or interventions;
 - Launch of timely investigations and responses to exposures, potential or confirmed communicable disease outbreaks, non-communicable disease clusters, and emerging public health issues; and
 - Further investigations using evaluation and/or research methods as identified in the Foundational Standard;
 - ii) Make decisions and set priorities; and
 - iii) Implement and act on decisions.
- b) The board of health shall continually incorporate new data and information generated from this decision-making process into the population health assessment and surveillance cycle.

Glossary

Ability/Disability: Disability and Ability are not absolute terms and fall along a continuum. According to the Ontarians with Disability Act,² disability means:

- a) any degree of physical disability, infirmity, malformation or disfigurement that is caused by bodily injury, birth defect or illness and, without limiting the generality of the foregoing, includes diabetes mellitus, epilepsy, a brain injury, any degree of paralysis, amputation, lack of physical co-ordination, blindness or visual impediment, deafness or hearing impediment, muteness or speech impediment, or physical reliance on a guide dog or other animal or on a wheelchair or other remedial appliance or device;
- b) a condition of mental impairment or a developmental disability;
- c) a learning disability, or a dysfunction in one or more of the processes involved in understanding or using symbols or spoken language;
- d) a mental disorder; or
- e) an injury or disability for which benefits were claimed or received under the insurance plan established under the Workplace Safety and Insurance Act, 1997³; (“handicap”).

Assessment: As one of the core functions of public health, assessment involves the systematic collection and analysis of data in order to provide a basis for decision-making. This may include collecting statistics on local health status, health needs, and/or other public health issues.⁴

Data: A set of facts or items of information, usually quantitative.⁵

Environment: The setting and conditions in which events occur. The total of all influences on life and health apart from genes, comprising the physical world and the economic, social, behavioural, cultural as well as physical conditions and factors that are determinants of health and well-being.⁵

Physical environment: The physical, chemical, and biological factors within the home, the neighbourhood, and/or the workplace, which are beyond the immediate control of the individual that affect health. Among the most important factors will be air and water quality, waste management (domestic, industrial, hazardous, toxic), other sources of harmful substances (such as heavy metals and persistent chemicals), radiation, housing and other buildings, open spaces, natural or wild areas, global structures, and natural phenomena (such as ozone layer and carbon cycle)⁶

The built environment is an important aspect of the physical environment and is comprised of urban and building design, land use, the transportation system and the infrastructure that support them. Several important built environment elements relate to walking rates. These elements include proximity to employment, retail, services, and recreation facilities along with other factors such as perceptions of safety, sense of community connectedness and neighborhood aesthetics.^{5,7,8}

Supportive environments: In a health context the term supportive environments refers to both the physical and the social aspects of our surroundings. It encompasses where people live, their local community, their homes, where they work and play. It also embraces the framework which determines access to resources for living, and opportunities for empowerment. Thus action to create supportive environments has many dimensions: physical, social, spiritual, economic and political. Each of these dimensions is inextricably linked to the others in a dynamic interaction.⁹

Health inequalities and inequities: Health inequalities can be defined as differences in health status or in the distribution of health determinants between different population groups. For example, differences in mobility between elderly people and younger populations or differences in mortality rates between people from different social classes. It is important to distinguish between inequality in health and inequity. Some health inequalities are attributable to biological variations or free choice, and others are attributable to the external environment and conditions mainly outside the control of the individuals concerned. In the first case it may be impossible or ethically or ideologically unacceptable to change the health determinants, and so the health inequalities are unavoidable. In the second, the uneven distribution may be unnecessary and avoidable as well as unjust and unfair, so that the resulting health inequalities also lead to inequity in health.¹⁰

Incidence: In epidemiology, the occurrence of new events or cases. This is expressed as an absolute number, or as a rate when the population at risk is known or can be reliably estimated and related to a specified period of time, so incidence rate is the number of new cases in a specified period/person-time at risk in this period. More loosely, as in many vital statistical measures, the average or mean population at risk during the period is commonly used as the denominator. A multiplier, 10^n , is used to produce a rate that is a whole number rather than a decimal fraction.⁵

Information: Facts (data) that have been arranged and/or transformed in order to provide the basis for analysis and interpretation and (ideally) transformation into knowledge. Information on public health is summarized in many ways for transmission to and use by public health officials to ensure that policies, programs and day-to-day decisions are rationally based.⁵

Monitoring: The intermittent performance and analysis of routine measurements, aimed at detecting changes in the environment or health status of populations.⁵

Morbidity: Sickness; the state or condition of being unwell.⁵

Population health: Population health is the health of the population, measured by health status indicators. Population health is influenced by physical, biological, behavioural, social, cultural, economic, and other factors. The term is also used to refer to the prevailing health level of the population, or a specified subset of the population, or the level to which the population aspires. Population health describes the state of health, and public health is the range of practices, procedures, methods, institutions, and disciplines required to achieve it. The term also is used to describe the academic disciplines involved in studies of determinants and dynamics of health status of the population.⁵

Risk factor: A term first used in the 1950s in reports of results from the Framingham Study of heart disease, meaning an aspect of behaviour or way of living, such as habitual patterns of diet, exercise, use of cigarettes and alcohol, etc., or a biological characteristic, genetic trait, or a health-related condition or environmental exposure with predictable effects on the risk of disease due to a specific cause, including in particular increased likelihood of an unfavourable outcome. Other meanings have been given to this term, such as determinants of diseases that can be modified by specific actions, behaviours, or treatment regimens. Risk factors may be divided into those directly related to disease outcomes (proximal risk factors), such as non-use of seat belts and risk of injury in automobile crashes, and those with indirect effect on outcomes (distal risk factors). An example of the latter is the influence of ozone-destroying substances, such as CFCs, on the risk of malignant melanoma, mediated by increased exposure to solar ultraviolet radiation because of depletion of protective stratospheric ozone.⁵

Situational assessment: A situational assessment influences planning in significant ways by examining the legal and political environment, stakeholders, the health needs of the population, the literature and previous evaluations, as well as the overall vision for the project. The phrase “situational assessment” is now used rather than the previous term “needs assessment.” This is intentional. The new terminology is used as a way to avoid the common pitfall of only looking at problems and difficulties. Instead it encourages considering the strengths of and opportunities for individuals and communities. In a health promotion context, this also means looking at socio-environmental conditions and broader determinants of health!¹¹

Socio-demographic status: A descriptive term for the position of persons in society based on a combination of economic and demographic characteristics based on age, sex, race, occupational, economic, and educational criteria, usually expressed in ordered categories, that is, on an ordinal scale. Many classification systems have been proposed from a simple division according to occupation, which usually relates closely to income and educational level, to more complex systems based on specific details of educational level, income, occupation, and sometimes other criteria, such as whether the usual place of dwelling is owned or rented and the rateable value of the dwelling. Other factors, including ethnicity, literacy and cultural characteristics, influence socio-economic status, which is an important determinant of health.^{5,12}

Surveillance: The ongoing systematic collection, analysis, and interpretation of health data, essential to the planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those who need to know. The final link in the surveillance chain is the application of these data to prevention and control. A surveillance system includes a functional capacity for data collection, analysis, and dissemination linked to public health programs.¹³

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