

Population Health Assessment and Surveillance Protocol, 2018

Population and Public Health Division,
Ministry of Health and Long-Term Care

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Preamble

The Ontario Public Health Standards: Requirements for Programs, Services, and Accountability (Standards) are published by the Minister of Health and Long-Term Care under the authority of section 7 of the *Health Protection and Promotion Act* (HPPA) to specify the mandatory health programs and services provided by boards of health.¹ ²The Standards identify the minimum expectations for public health programs and services. Boards of health are accountable for implementing the Standards including the protocols and guidelines that are referenced in the Standards. Protocols are program and topic-specific documents incorporated into the Standards which provide direction on how boards of health shall operationalize specific requirement(s) identified within the Standards.

Purpose

The purpose of this protocol is to provide direction on population health assessment and surveillance activities as defined in the Standards to ensure that local public health practice is informed to effectively and efficiently identify and address current and evolving population 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 social determinants of health, identify priority populations* and use population health data and information to focus public health action. Implicit in this protocol are the principles of Need, Impact, Capacity and Partnership, Collaboration and Engagement as outlined in the Standards. Embedded throughout population health assessment and surveillance activities, is the underlying responsibility and understanding by boards of health to engage community partners and priority populations.

In light of the Final Report and Calls to Action of the Truth and Reconciliation Commission (2015), boards of health and researchers are increasingly considering how to work with Indigenous (First Nation, Métis and Inuit) communities to support research and surveillance activities that respect the principles of self-determination and nation-to-nation relationship building.³

The ministry encourages collaboration and engagement between boards of health and Indigenous communities, understanding that building reciprocal, trusting relationships will take some time and must be done in ways that are culturally safe. Indigenous communities, scholars and researchers may approach boards of health to provide assistance and support in the research, assessment and/or surveillance of Indigenous

* Priority populations are those that are experiencing and/or at increased risk of poor health outcomes due to the burden of disease and/or factors for disease; the determinants of health including the social determinants of health; and/or the intersection between them. They are identified using local, provincial and/or federal data sources; emerging trends and local context; community assessments; surveillance; epidemiological and other research studies.

communities. The approach for working with Indigenous communities for population health assessment and surveillance will be outlined in the *Relationship with Indigenous Communities Guideline, 2018* (or as current).⁴

The Ministry of Health and Long-Term Care (the “ministry”) acknowledges that any form of Indigenous specific data collection, analysis and reporting must be driven by communities and based on Ownership, Control, Access and Possession (OCAP) principles, to assert self-determination over data collected from, or about, Indigenous peoples and communities.

All actions taken by boards of health to collect, use or disclose information specified in this Protocol shall comply with all applicable privacy laws, including the *Personal Health Information Protection Act, 2004* and the *Municipal Freedom of Information and Protection of Privacy Act*.

Reference to the Standards

This section identifies the standards and requirements to which this protocol relates.

Population Health Assessment

Requirement 1. The board of health shall conduct surveillance, including the ongoing collection, collation, analysis, and periodic reporting of population health information, as required by the *Health Protection and Promotion Act* and in accordance with the *Population Health Assessment and Surveillance Protocol, 2018* (or as current).

Requirement 2. The board of health shall interpret and use surveillance data to communicate information on risks to relevant audiences in accordance with the *Healthy Environments and Climate Change Guideline, 2018* (or as current); the *Infectious Diseases Protocol, 2018* (or as current); and the *Population Health Assessment and Surveillance Protocol, 2018* (or as current).

Requirement 3. The board of health shall assess current health status, health behaviours, preventive health practices, risk and protective factors, health care utilization relevant to public health, and demographic indicators, including the assessment of trends and changes, in accordance with the *Population Health Assessment and Surveillance Protocol, 2018* (or as current).

Requirement 6. The board of health shall provide population health information, including social determinants of health, health inequities, and other relevant sources to the public, community partners, and other health care providers in accordance with the *Population Health Assessment and Surveillance Protocol, 2018* (or as current).

Health Equity

Requirement 1. The board of health shall assess and report on the health of local populations describing the existence and impact of health inequities and identifying effective local strategies that decrease health inequities in accordance with the *Health*

Equity Guideline, 2018 (or as current) and the Population Health Assessment and Surveillance Protocol, 2018 (or as current).

Chronic Disease Prevention and Well-Being

Requirement 1. The board of health shall collect and analyze relevant data to monitor trends over time, emerging trends, priorities, and health inequities related to chronic diseases and report and disseminate the data and information in accordance with the *Population Health Assessment and Surveillance Protocol, 2018 (or as current)*.

Food Safety

Requirement 1. The board of health shall:

- a) Conduct surveillance of suspected and confirmed food-borne illnesses, food premises, and food for public consumption;
- b) Conduct epidemiological analysis of surveillance data including monitoring of trends over time, emerging trends, and priority populations; and
- c) Respond by adapting programs and services

in accordance with the *Food Safety Protocol, 2018 (or as current)*; the *Operational Approaches for Food Safety Guideline, 2018 (or as current)*; and the *Population Health Assessment and Surveillance Protocol, 2018 (or as current)*.

Healthy Environments

Requirement 1. The board of health shall:

- a) Conduct surveillance of environmental factors in the community;
- b) Conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations; and
- c) Use information obtained to inform healthy environments programs and services

in accordance with the *Health Hazard Response Protocol, 2018 (or as current)*; the *Healthy Environments and Climate Change Guideline, 2018 (or as current)*; the *Infectious Diseases Protocol, 2018 (or as current)*; and the *Population Health Assessment and Surveillance Protocol, 2018 (or as current)*.

Healthy Growth and Development

Requirement 1. The board of health shall collect and analyze relevant data to monitor trends over time, emerging trends, priorities, and health inequities related to healthy growth and development and report and disseminate the data and information in accordance with the *Population Health Assessment and Surveillance Protocol, 2018 (or as current)*.

Immunization

Requirement 2. The board of health shall conduct epidemiological analysis of surveillance data for vaccine preventable diseases, vaccine coverage, and adverse events following immunization, including monitoring of trends over time, emerging trends, and priority populations in accordance with the *Infectious Diseases Protocol, 2018* (or as current) and the *Population Health Assessment and Surveillance Protocol, 2018* (or as current).

Infectious and Communicable Diseases Prevention and Control

Requirement 1. The board of health shall conduct population health assessment and surveillance regarding infectious and communicable diseases and their determinants. These efforts shall include:

- a) Reporting data elements in accordance with the *Health Protection and Promotion Act*; the *Infectious Diseases Protocol, 2018* (or as current); the *Rabies Prevention and Control Protocol, 2018* (or as current); the *Sexual Health and Sexually Transmitted/Blood-Borne Infections Prevention and Control Protocol, 2018* (or as current); and the *Tuberculosis Prevention and Control Protocol, 2018* (or as current);
- b) Conducting surveillance and epidemiological analysis, including the monitoring of trends over time, emerging trends, and priority populations in accordance with the *Infectious Diseases Protocol, 2018* (or as current); the *Population Health Assessment and Surveillance Protocol, 2018* (or as current); the *Rabies Prevention and Control Protocol, 2018* (or as current); the *Sexual Health and Sexually Transmitted/Blood-Borne Infections Prevention and Control Protocol, 2018* (or as current); and the *Tuberculosis Prevention and Control Protocol, 2018* (or as current);
- c) Responding to international, Federal/Provincial/Territorial and local changes in diseases epidemiology by adapting programs and services; and
- d) Using the information obtained through assessment and surveillance to inform program development regarding communicable diseases and other infectious diseases of public health importance.

Safe Water

Requirement 1. The board of health shall:

- a) Conduct surveillance of:
 - Drinking water systems and associated illnesses, risk factors, and emerging trends;
 - Public beaches and water-borne illnesses associated with recreational water, risk factors, and emerging trends; and
 - Recreational water facilities;

- b) Conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations; and
- c) Use the information obtained to inform safe water programs and services in accordance with the *Infectious Diseases Protocol, 2018* (or as current); the *Population Health Assessment and Surveillance Protocol, 2018* (or as current); the *Recreational Water Protocol, 2018* (or as current); the *Safe Drinking Water and Fluoride Monitoring Protocol, 2018* (or as current); and the *Small Drinking Water Systems Risk Assessment Guideline, 2018* (or as current).

School Health

Requirement 1. The board of health shall collect and analyze relevant data to monitor trends over time, emerging trends, priorities, and health inequities related to the health of school-aged children and youth and report and disseminate the data and information in accordance with the *Population Health Assessment and Surveillance Protocol, 2018* (or as current).

Requirement 5. The board of health shall conduct surveillance, oral screening, and report data and information in accordance with the *Oral Health Protocol, 2018* (or as current) and the *Population Health Assessment and Surveillance Protocol, 2018* (or as current).

Substance Use and Injury Prevention

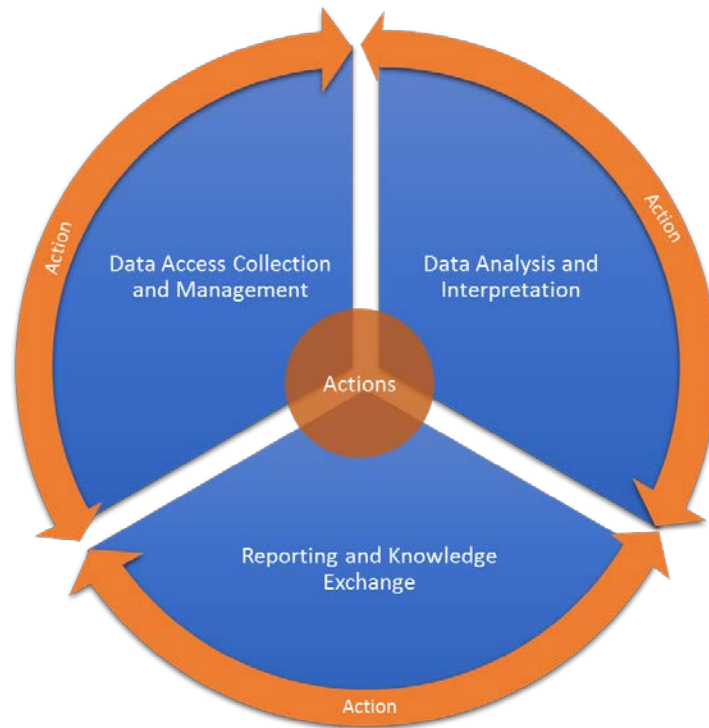
Requirement 1. The board of health shall collect and analyze relevant data to monitor trends over time, emerging trends, priorities, and health inequities related to injuries and substance use and report and disseminate the data and information in accordance with the *Population Health Assessment and Surveillance Protocol, 2018* (or as current).

Operational Roles and Responsibilities

The population health assessment and surveillance process

Population health assessment includes the measurement, monitoring, analysis, and interpretation of population health data, knowledge and intelligence about the health status of populations and subpopulations, including the social determinants of health and health inequities. Surveillance is the continuous, systematic collection, analysis and interpretation of health-related data needed for the planning, implementation, and evaluation of public health practice.⁵ As such, the population health assessment and surveillance process entails data access, collection, and management; data analysis and interpretation; reporting and knowledge exchange; and action. Figure 1 illustrates the interplay among the population health assessment and surveillance process components. The components are iterative, cyclical, and dynamic; and entrance into the process and actions emanating from it can occur throughout.

Figure 1: Population Health Assessment and Surveillance Process



Data Access, Collection and Management

- 1) The board of health shall, subject to applicable privacy laws, including the *Personal Health Information Protection Act, 2004* and the *Municipal Freedom of Information and Protection of Privacy Act* collect and use timely quantitative and qualitative data and information obtained from multiple sources and methods in order to undertake population health assessment and surveillance. Table 1 depicts categories of population health data and inclusions that shall be used for population health assessment and surveillance to inform public health practice, programs and services:

Table 1: Categories of Population Health Data and Inclusions

Category of Data and Information:	Including, but not limited to (with specific examples named as per the Program Standards and other strategic priorities):
Population	
Demographics	Age; Sex; Gender Identity; Sexual Orientation; Ethnicity / Race; Family Structure; Indigenous Identity; Immigration; Language; Disability; and Population Size, Distribution and Growth
Socio-Economic Status	Income; Education; Employment; Housing
Living and Working Conditions	Food Security; Social Support / Isolation; Healthy Family Dynamics; Violence; and Work Stress
Geography	Population Density; Urban / Rural / Remote; and Administrative Boundaries (including LHIN boundaries and sub-regions where feasible)
Health Status	
Mortality and Morbidity	Death by Cause; Emergency department visits and hospitalizations; Life Expectancy; Reportable Diseases and other Infectious Diseases of Public Health Importance (including Influenza, Enteric Illness/Disease, Vaccine Preventable Diseases, Sexually Transmitted Infections, Food-Borne and Water-Borne Illness, Tuberculosis, and Rabies); Chronic Diseases of Public Health Importance; Injury by cause (including Falls, Suicide and Self-Harm, Substance Use-Related); Injury by type (including Concussions); Health Impacts Related to Health Hazards and Climate Change; and Adverse Events following Immunization
Health and Wellness	Self-Rated Health; Ability; Mental Illness (including anxiety, depression, and psychological distress), Self-Rated Mental Health (including well-being and coping); Oral Health; Visual Health; Preconception Health; Pregnancy; Reproductive Outcomes; Early Childhood (including adverse childhood experiences and achievement of developmental milestones); and Healthy Weights

Population Health Assessment and Surveillance Protocol, 2018

Category of Data and Information:	Including, but not limited to (with specific examples named as per the Program Standards and other strategic priorities):
Behavioural Factors	
Health Services Seeking Behaviours	Immunization; Screening (including Cancer Screening and Vision Screening); Oral Health Services; Reproductive Services (including Use of Assistive Reproductive Therapies and Family Planning); and Assessments of Growth and Development (including Well-Baby Visits), Mental Health Services (including counseling and psychological supports), Harm Reduction
Health Behaviours	Physical Activity and Sedentary Behaviour; Sun Safety; Use of Tobacco (including e-Cigarettes and Emerging Products); Substance Use (including Alcohol, Cannabis, Opioids, Illicit, and Other Substances); Healthy Eating; Food-handling Practices; Infant Feeding; Road and Off-Road Safety; Infection Prevention and Control Practices; Sexual Practices; and Sleep
Elements of Behaviour Change	Awareness of Healthy Behaviours; Awareness of Risk and Protective Factors; Knowledge and Skills (includes Injury Prevention and Safe Management of Private Water); Substance Use Prevention and Harm Reduction; Health Beliefs (including Healthy Sexuality and Healthy Weights); Behaviour Change Readiness; Preparation for Parenting; Confidence in Immunization; Mental Health Promotion (including help-seeking behaviours, self-care, accessing mental health services); Awareness and understanding of climate change; and Adoption of disaster preparedness practices.
Environmental Factors	
Social Environment	Cultural, Political and Economic Contexts (including Population and Health Inequities); Food Environments (including Access, Affordability, and Food Safety); Fluoride Levels; Premises Compliance with Legislation and Operational Practices; Availability of Programs and Services (including Sexual Health Services, Harm Reduction Support, Healthy Growth and Development Resources, and Oral Health Care); and Barriers to Accessing Supports and Services (including Client/Community Experiences), Stigma and Discrimination
Natural & Built Environment	Community Assets (includes Facilities, Premises / Vendors, and other aspects of the Built Environment); Natural Assets; Physical Activity and Recreation Environments; Radiation; Environmental Contaminants (safe drinking water, outdoor and indoor air pollutants, etc.); Disease Vectors; Extreme Weather; Climate Change; and All-hazards risk assessments.
Socio-Political Aspects of Environmental Change	Public Awareness of Adverse Events (including Health Hazards, Effects of Climate Change, Infection Prevention and Control Lapses and Situations that may affect Food and Water Safety); Support or Opposition to Policies, Programs and Services; Public Knowledge about Creating Healthy and Supportive Environments; Access to early warning information; Public awareness of local community disaster management plans; and mitigation plan activities data.

Population Health Assessment and Surveillance Protocol, 2018

- 2) The board of health shall maximize, where feasible, its collection, and use of the following, in addition to any other system or information as specified by the ministry:
 - a) Public health information systems:
 - i) Digital Health Immunization Repository (DHIR)/Panorama
 - ii) Drinking Water Adverse Reporting System (DWARS)
 - iii) Environmental Health Information Systems (i.e., in house or commercial applications)
 - iv) Healthy Child Development – Integrated Services for Children Information System (HCD-ISCIS)
 - v) Integrated Public Health Information System (iPHIS)
 - vi) Ontario Harm Reduction Database
 - vii) Oral Health Information Support System (OHISS)
 - viii) Small Drinking Water Systems Information System (SDWSIS), including Risk Categorization Tool (RCat) and Laboratory Results Management Application (LRMA)
 - ix) Tobacco Information System (TIS)
 - b) Other information:
 - i) Administrative Databases (e.g., Discharge Abstract Database [DAD], National Ambulatory Care Reporting System Metadata [NACRS], Ontario Mental Health Reporting System Metadata [OMHRS], etc.)
 - ii) Data from other organizations
 - iii) Databases managed by Ministry of Environment and Climate Change (MOECC) with access to public health units
 - iv) Drug and Alcohol Treatment Information System (DATIS)
 - v) Primary Data collection (e.g., Board of Health/practitioner owned)
 - vi) Registries (e.g., Ontario Cancer Registry, Better Outcomes Registry Network Information System, etc.)
 - vii) Surveillance/Monitoring Databases (e.g., Acute Enhanced Surveillance [ACES], Ontario's Narcotics Monitoring System, Interactive Opioid Tool)
 - viii) Surveys (e.g., Centre for Addiction and Mental Health [CAMH] Monitor, Canadian Community Health Survey [CCHS], Census Data, Early Development Instrument [EDI], Ontario Student Drug Use and Health Survey [OSDUHS], Rapid Risk Factor Surveillance Strategy [RRFSS], where available, etc.)
 - ix) Vital Statistics
- 3) The board of health shall adopt, adapt, or develop techniques, tools, and/or systems for the collection and use (including management, and integration) of population health data and information, as required.
- 4) The board of health shall collect and use provincially defined and centrally provided population health indicators to inform board of health and LHIN collaboration as

referenced in the *Board of Health and Local Health Integration Network Engagement Guideline, 2018* (or as current).⁶

- 5) The board of health shall take all steps necessary to protect personal information and personal health information when collecting, using and disclosing population health data and information[†].
- 6) The board of health shall employ rigorous and sound methods in collecting and using data using appropriate sampling and reducing potential sources of bias and error to optimize data quality.
- 7) The board of health shall use quantitative and qualitative data and information from primary and secondary data sources including consideration of the following factors and sources of evidence:
 - a) Research and evaluation results such as, but not limited to:
 - i) Literature (peer-reviewed and/or other “grey” literature) or reports describing outcomes of interest at the local, regional, provincial and/or national level
 - ii) Literature or reports describing associations between outcomes of interest and the determinants of health and the presence of inequities
 - iii) Literature or evaluation reports describing evidence of effective interventions addressing outcomes of interest
 - b) Stakeholder/Community/Public policies, preferences and actions:
 - i) Surveys or qualitative research to assess stakeholder/community/public needs, attitudes, support/opposition, awareness and knowledge
 - ii) Environmental scans to assess the current policies
 - iii) Stakeholder interviews to assess current political or organizational climate
 - iv) Consultation information on programs and services.
 - c) Policy and program documentation, including evaluation; and
 - d) Other primary data collection (qualitative or quantitative), as well as data and information from other local, academic, regional, provincial, and national sources including portal-based and electronic medical/health record data, where feasible.

[†] Particular attention should be paid to the size of communities or populations being explored and the risk of privacy breach associated with small cell counts.

Data Analysis and Interpretation

- 1) The board of health shall use standard definitions of variables and health indicators, where available and appropriate, to collect, access, and analyze population health data and information. The Association of Public Health Epidemiologists of Ontario (APHEO), Statistics Canada, the Canadian Institute for Health Information (CIHI), and the ministry provide standard definitions for indicators which shall be used where available.
- 2) The board of health shall integrate data and information from multiple sources, as appropriate. It shall exercise sound judgment and apply responsible decision-making processes to analyze and interpret health data and information.
- 3) The board of health shall, when analyzing health data and information:
 - a) Use quantitative and qualitative methods of data analysis as appropriate to the issue;
 - b) Define populations of interest to determine inclusion and exclusion criteria for analysis;
 - c) Document and provide analysis details, including data sources, methods, assumptions, indicator definitions, and data limitations; and
 - d) Use the most currently available data to describe the health status of the population, as appropriate.
- 4) The board of health shall undertake monitoring, analysis, and interpretation of population health data and information including population, health status, behavioural factors, and environmental factors 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, available interventions, and the consequences of decision-making.
- 5) The board of health shall identify priority populations by:
 - a) Analyzing the following factors including distribution and trends in person, place and time:
 - i) Social determinants of health including socio-demographic and geographic characteristics;
 - ii) Social inequities;
 - iii) Burden of illness and risk and protective factors associated with health outcomes; and
 - iv) The intersections of the above including geo-spatial trends.
 - b) Interpreting the above analysis in relation to:
 - i) Program and service outcomes and goals;
 - ii) Program evaluation data;

- iii) Other information (e.g., research, grey literature, etc.) that identifies program benefits and gaps;
 - iv) Information obtained through community engagement activities with relevant priority populations; and
 - v) Emerging issues identified by clients, board of health staff, community or local, provincial and/or federal levels of government.
- c) Undertaking on-going analysis and interpretation to optimize effective and efficient program and service delivery[‡].
- 6) As part of an evidence-informed decision-making approach, as per the Foundational Standards, the board of health shall synthesize data and information into a situational assessment (e.g., context) as required. A situational assessment includes, but is not limited to the use of the following types and sources of information:
- a) Key facts, findings, trends, and recommendations from the literature, including grey literature;
 - b) Data and analyses obtained from population health assessment and surveillance;
 - c) Qualitative data;
 - d) Environmental scans;
 - e) Legal and political environments;
 - f) Stakeholder perspectives including those of identified priority populations;
 - g) Capacity including community assets and limitations; and
 - h) Recommendations based on past experiences, including program evaluation information.

Reporting and Knowledge Exchange

- 1) The board of health shall develop and maintain an appropriate plan for reporting and knowledge exchange that identifies:
 - a) The characteristics of the data and information;
 - b) The intended audiences;
 - c) The frequency with which reporting will take place; and
 - d) The information products and vehicles to be used (e.g., print, web, social media, etc.).
- 2) The board of health shall produce information products to communicate population health assessment and surveillance results. Information products shall:
 - a) Be understandable, culturally safe, and useable by the intended audience(s);
 - b) Be timely in terms of issues, policy-making cycles, and seasonality to maximize visibility and impact;

[‡] Consider the *Health Equity Guideline, 2018* (or as current) when analyzing data at the community level.⁷

- c) Present the relationship between health and social inequities, where appropriate; and
 - d) Adhere to privacy legislation.
- 3) The board of health shall distribute and/or make available population health assessment and surveillance information products as appropriate to:
- a) Professionals/practitioners, policy-makers and decision-makers, including:
 - i) Board of health staff;
 - ii) Boards of health and government (local, provincial and/or federal);
 - iii) The broader health system (e.g., LHINs, health service providers and organizations, Community Mental Health and Addictions Services, Community Health Centres, etc.);
 - iv) Community partners (e.g., social service agencies, community support services, educational facilities, governmental and non-governmental agencies, such as those addressing health-related /determinants of health issues, etc.);
 - b) Affected populations; and
 - c) The general public.

Action

- 1) The board of health shall use population health assessment and surveillance data and other information to identify options, set priorities, and implement decisions for action, including but not limited to:
- a) Collecting additional data or performing additional analyses;
 - b) Informing the board of health's strategic and operational planning;
 - c) Launching timely investigations and responses to adverse exposures, potential or confirmed communicable disease outbreaks, non-communicable disease clusters, and emerging public health issues;
 - d) Undertaking further investigations using evaluation and/or research methods as identified in the Foundational Standards and their supporting protocols and guidelines;
 - e) Undertaking quality improvement activities, both at the organizational and the programmatic levels;
 - f) Continuing, modifying and/or discontinuing existing policies, programs, or interventions, as well as creating new policies, programs, or interventions;
 - g) Collaborating with other health system partners (e.g., LHINs, Primary Care, etc.) including, but not limited to, knowledge exchange and translation for policies and program and service delivery planning, implementation, and evaluation; and
 - h) Community engagement with partners (e.g., boards of education; municipal, provincial and federal partners; social/cultural/spiritual community groups; etc.) including, but not limited to, knowledge exchange and translation to inform other areas of planning, such as: child care;

Population Health Assessment and Surveillance Protocol, 2018

education; environmental including built and natural environments; housing; etc.

- 2) The board of health shall engage in continuous quality improvement through:
 - a) Continued validation of the relevance of data elements used to monitor population health assessment and surveillance;
 - b) Ongoing integration of new data and information into the population health assessment and surveillance processes; and
 - c) Evaluation of the effectiveness of products and processes employed in population health assessment and surveillance.

Glossary

Ability/Disability: Disability and Ability are not absolute terms and fall along a continuum. According to the *Ontarians with Disability Act*, disability means:⁸

- 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, 1997* (“handicap”).⁹

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.¹⁰

Data: A set of facts or items of information, usually quantitative.¹¹

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.¹¹

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).¹¹

The built environment is an important aspect of the physical environment and comprises 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.¹¹⁻¹³

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.¹⁴

Health equity: Means that all people can reach their full health potential and are not disadvantaged from attaining it because of their race, ethnicity, religion, gender, age, social class, socioeconomic status or other socially determined circumstance.¹

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.¹⁰

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.¹¹

Monitoring: The intermittent performance and analysis of routine measurements, aimed at detecting changes in the environment or health status of populations.¹¹

Morbidity: Sickness; the state or condition of being unwell.¹¹

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.¹¹

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.¹¹

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.¹⁵

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.^{11, 16}

Surveillance: The continuous, systematic collection, analysis, and interpretation of health data, needed for the planning, implementation, and evaluation of public health practice. Such surveillance can:

- serve as an early warning system for impending public health emergencies;
- document the impact of an intervention, or track progress towards specified goals; and
- monitor and clarify the epidemiology of health problems, to allow priorities to be set and to inform public health policy and strategies.⁵

References

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