

# Self Learning Module: Public Health Surveillance

## **Why do you need to know about Public Health Surveillance?**

As Public Health Nurses, you live and work in a community providing many services to clients, families and groups like schools. You are very busy with your clinics, home visits, teaching opportunities and committee work! You are also the “eyes and ears” of what is happening in these communities and that is one of the foundational components of a Public Health Surveillance system. You are part of a larger network that is watching, listening and gathering information on key health areas. This information is then funnelled to a central location to be reviewed - always being on the “look-out” for changes that need action to help protect the public’s health or figure out where the health inequities are so we can focus our work there. We need this public health surveillance system to be able to promptly respond to a new disease trend, or to figure out what ‘type’ of person is more likely to have severe health consequences requiring additional protection/care, or to identify a group that is disadvantaged and needs a community response to help them improve their health or even to do better in school. It is how we gather our “intelligence” so that we can work smarter and know we are making a difference.

## **What is Public Health Surveillance?**

According to the World Health Organization (WHO) and Centers for Disease Control and Prevention (CDC), Public Health Surveillance is the “ongoing, systematic collection, analysis, and interpretation of health-related data essential to planning, implementation, and evaluation of public health practice.” (<https://www.who.int/emergencies/surveillance>; <https://www.cdc.gov/training/publichealth101/surveillance.html>)

Public Health 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.
- monitor and clarify the epidemiology of health problems, to allow priorities to be set and to inform public health policy and strategies.

## **Why is the *Public Health Act* connected to Surveillance programs?**

Included below is the full section from the Public Health Act that references the gathering, sharing and ongoing monitoring of health information. Public Health professionals need special authority to do this as we are collecting personal health information for broader reasons than just their individual care. We are also requiring professionals (e.g., Lab Directors, Physicians and Nurses Practitioners) to report to us when they notice things (like “reportable diseases”) so we need a legal foundation to do that. Finally, we are asking people some very strange questions and expecting them to answer us – and the *Act* gives us that authority too. Section 82(1) that is highlighted below is an excellent list, outlining the functions of the surveillance system.

## PART 8

### INFORMATION GATHERING AND SHARING AND HEALTH SURVEILLANCE

#### DEFINITIONS

##### Definitions

77 The following definitions apply in this Part.

"**government agency**" means a government agency as defined under *The Freedom of Information and Protection of Privacy Act*. (« organisme gouvernemental »)

"**government department**" means a department, branch or office of the executive government of the province. (« ministère »)

"**information**" includes personal information, personal health information, proprietary information and confidential information. (« renseignements »)

"**person**" includes a government agency and a government department. (« personne »)

#### REQUIREMENT TO PROVIDE INFORMATION ABOUT PUBLIC HEALTH THREATS

##### Information about public health threat

78(1) The chief public health officer may require any person to provide information that the chief public health officer reasonably considers necessary to assess the threat that a disease presents to public health, and to plan for and deal with the threat.

##### Officials authorized to collect information

78(2) The chief public health officer may, in writing, authorize a director, medical officer, inspector, health officer, public health nurse or regional health authority to collect the information required under subsection (1) on his or her behalf.

##### Duty to provide information

79 A person required to provide information under section 78 must do so.

#### INFORMATION SHARING

##### Information sharing: minister and chief public health officer

80 For the purpose of assessing the impact of, and planning for and dealing with, a threat to public health, the minister or the chief public health officer may disclose information to each other and to any of the following:

- (a) a director, medical officer, inspector, public health nurse or health officer;
- (b) a government department or government agency;
- (c) an educational body, health care body or local government body as defined under *The Freedom of Information and Protection of Privacy Act*;
- (d) a department or agency of the Government of Canada or of another province or territory of Canada;
- (e) a person or entity designated by the Government of Canada or by the government of another province or territory of Canada as being responsible for public health services;
- (f) a band as defined in the *Indian Act* (Canada);
- (g) the government of a foreign country, or of a state, province or territory of a foreign country;
- (h) an organization representing one or more governments, or an international organization of states.

### Information sharing: medical officers, etc.

81 Subject to the regulations, for the purpose of administering or determining compliance with this Act, a director, medical officer, inspector, health officer or public health nurse may disclose information to any person described in the regulations.

## HEALTH SURVEILLANCE

### Health surveillance system

82(1) The minister has the authority to establish and maintain, or cause to be established and maintained, a provincial system of health surveillance for the ongoing, systematic collection, analysis, interpretation, publication and distribution of information necessary to

- (a) gain an overall understanding of the health status of Manitobans;
- (b) anticipate, assess, monitor and plan for health needs and threats to public health;
- (c) monitor and evaluate developments respecting public health and threats to public health;
- (d) guide decisions and actions respecting public health;
- (e) monitor and evaluate public health services;
- (f) facilitate public health research and planning;
- (g) produce public health advisories, reports and other notices; or
- (h) permit timely access to and distribution of information.

### Registries of information

82(2) The provincial health surveillance system must include the registries of information established and maintained in accordance with the regulations, and may include other information and other collections and compilations of information.

### Trustee may be designated to maintain a registry

82(3) Subject to the regulations, a registry forming part of the provincial health surveillance system may be established, maintained, or both, by a person who is a trustee under *The Personal Health Information Act* and who is designated in the regulations for this purpose.

### Collecting, etc. information for system

82(4) For the purposes of the provincial health surveillance system, the minister, and any person authorized by the minister, may

- (a) obtain or collect information from any source;
- (b) use, analyze and interpret information in the system;
- (c) link information in the system with other information, whether the information is in the system or outside of it; and
- (d) disclose information in the system.

### What are the different types of Public Health Surveillance?

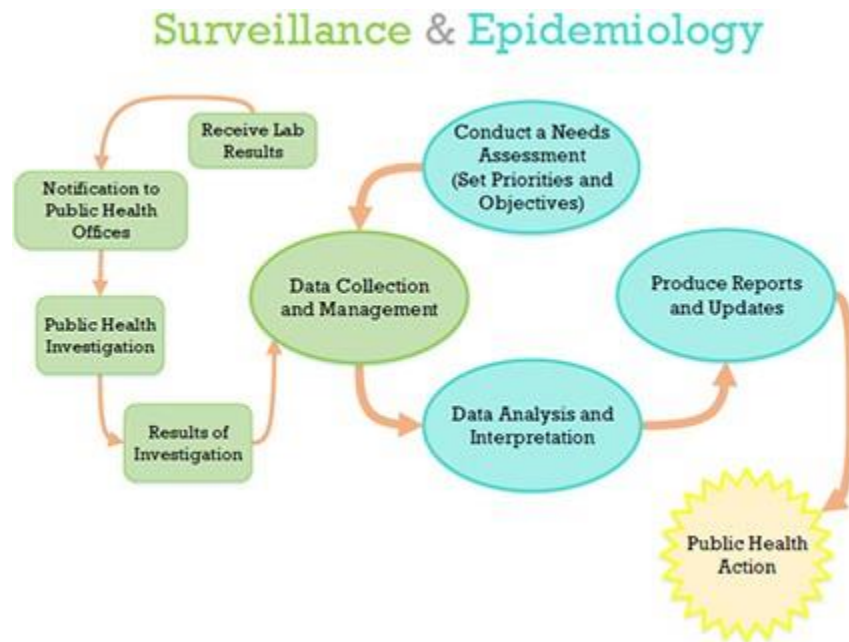
Surveillance mechanisms can be termed as active or passive. More specifically:

- Active surveillance is a system of employing staff members to regularly contact health care providers or the population to seek information about health conditions; it is expensive and labour intensive, but it is accurate and timely. An example would be contact tracing for a communicable disease case.

- Passive surveillance is a system in which a health authority receives reports submitted from hospitals, clinics, public health units or other sources; it is inexpensive and can encompass large geographical areas, but the data quality/reliability and timeliness are typically not as good as with active surveillance. An example is the reporting of Adverse Events following Immunizations (AEFI).
- Routine Health Information Systems. This too is a passive surveillance system, but the difference is that the reporting has become a routine (automatic) part of the daily operations. This improves the data quality and timeliness. An example would be the Public Health Information Management System (PHIMS) or reporting of designated disease test results (e.g., “reportable diseases”) from laboratories.

**Reflection Question:**

How important is it to fill out all the sections of the Communicable Disease (CD) forms? Think about those forms for a moment. Every section of those forms is reviewed a number of times before it is finalized in the CD database in the Provincial Epidemiology and Surveillance Unit....after you complete the form, it is reviewed by your area CD Coordinator....then it goes to the Medical Officer of Health.... then the provincial clerical staff review for completeness... then the data is analysed for trends by the Epidemiologists and reported out to the regions. Accuracy and completeness of every piece of information counts; and as you are on the front line doing the gathering, this responsibility rests on your shoulders. Your work matters a great deal! The drawing below is a nice summary of how surveillance and epidemiology work together in our Public Health Surveillance system.



<https://www.gov.mb.ca/health/publichealth/surveillance/index.html>

## What are some common examples of Public Health Surveillance?

Now, let's look at some examples. Remember Public Health 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.
- monitor and clarify the epidemiology of health problems, to allow priorities to be set and to inform public health policy and strategies.

### An Example of an “early warning system”:

- Communicable Disease: The information from your reports is collated provincially. Every two weeks a short and current report of the provincial CDs (called EpiView) is shared with the Medical Officers of Health, the CD Coordinators, and the Infection Prevention and Control Practitioners. There is a constant review to look for changing trends that could trigger more specific public health responses beyond what is listed in our CD Protocol Manuals.

### **Reflection Question:**

In Southern Health-Santé Sud (SH-SS), we have a practice guideline that outlines how quickly different kinds of diseases need to be prioritized. (reference: CLI.6210.SG.001.SD.01 *Prioritization of Public Health Follow-up of Communicable Diseases*). Why do you think we developed this?

### Example of “tracking progress towards specified goals”.

- Immunization Monitoring System: All the entries in the Public Health Information Management System (PHIMS) can be analyzed to track our progress by province/region and district on how we are achieving our target coverage rates for vaccine preventable diseases. Annual reports can be found at:  
<http://www.gov.mb.ca/health/publichealth/surveillance/mims/index.html>

### **Reflection Question:**

Although not part of the public document, each region is able to get the vaccine coverage rates broken down to the district levels. How does having this data for smaller geographical areas help with program planning?

### An example of “monitoring to inform public health policy and strategies”.

- Community Health Assessment (CHA): Every five years the regional health authorities are required to prepare a public report assessing the health of the region. In the CHA there are over a hundred indicators, some of which come from our public health programming areas. Southern Health-Santé Sud has structured the CHA report to have a focused review of health inequities within our region. Analysis of this information will help inform and direct strategies that our multi-disciplinary groups can focus on with our partners to improve health, particularly of vulnerable or disadvantaged groups. Details of the CHA can be found at: <http://www.southernhealth.ca/cha.php>

**Reflection Question:**

Have a look at the Community Health Assessment. Focus on a few indicators and look at the information for the district that you work in. Think of some ways that you could use this information in your public health work.

**Summary**

Public Health Surveillance starts with Public Health Nurses being the “eyes and ears” in the communities looking for key health flags that could signal potential health threats. It includes routine and regular reporting that may seem mundane but becomes part of the larger system that gives us the “big picture” of what is happening. Surveillance and routine data collection also become part of broad initiatives like the Community Health Assessment that monitors how our work impacts the overall health of our clients and communities. Accuracy matters. Surveillance matters. As stated before, surveillance is how we gather our “intelligence” so that we can work smarter and know we are making a difference.

*For more information on Canadian surveillance systems, please refer to the Public Health Agency of Canada’s “Public health surveillance” website at: <https://www.canada.ca/en/public-health/services/surveillance.html>*