Communicable diseases are a public health concern in Canada and early detection of communicable diseases can assist in implementation of measures aimed at minimizing and preventing further transmission, hence their surveillance is critical [1,2]. Surveillance is generally defined as the systematic collection, analysis, and interpretation of data for diseases of public health significance, including healthcare associated infections and antimicrobial resistant organisms [3]. It is closely integrated with the timely dissemination of these data to those responsible for preventing and controlling diseases [3]. Surveillance activities may be continuous in nature, or data may be gathered via point prevalence studies. Activities may be conducted at unit, facility, province, territory, national and international levels. Understanding and practice of communicable disease surveillance are core competencies of those practicing in infection prevention and control [4]. Surveillance is integral to infection prevention and control because it measures the burden of disease and so the need for interventions and the efficacy of interventions aimed at controlling the spread of communicable diseases. Surveillance data are used to establish benchmark reference points for internal and external comparison of the incidence and prevalence of disease, including detection of sentinel events, outbreaks and pandemics. Potential risk factors for acquisition and carriage of a disease can be derived from surveillance datasets. Surveillance also functions to provide timely, useful evidence to leaders and decision makers to establish priorities, and guide policies and programs.

Despite the value of communicable disease surveillance, many practicing in infection prevention and control face barriers in conducting surveillance. Common surveillance challenges include inadequate information technology resources, lack of access to health records and other key information sources because of geographic restrictions and unavailability of electronic records, a shortage of skilled staff, and competing responsibilities and budget priorities. IPAC Canada offers a number of tools to support members and non-members in their surveillance practice. All resources are available on the Surveillance and Applied Epidemiology Interest Group webpage.

1. IPAC Canada created standardized infection case definitions for use in Canadian long-term care (LTC) facilities [5]. These surveillance definitions were used to inform the LTC Surveillance Toolkit described below. These are recommended for use in Canadian LTC settings to provide a standard set of definitions that allow for benchmarking and comparison between jurisdictions across Canada.

2. IPAC Canada developed a position statement supporting surveillance in LTC settings [6]. This position statement includes a recommendation that all LTC settings in Canada routinely conduct surveillance for healthcare-associated infections at a minimum. The position statement is especially useful for those geographic jurisdictions where surveillance in LTC is not a legal mandate.

3. The IPAC Canada LTC Surveillance Toolkit, adapted from Public Health Ontario, supports the entire surveillance process. It contains tools to assess readiness to conduct surveillance, staff training and tools to support data collection and validation, using the IPAC Canada LTC case definitions, though the Toolkit can be customized for any set of definitions. The Toolkit contains a Microsoft Excel database to store data and is set up to automatically calculate rates of all infections and of those deemed to be healthcare-associated only, and to prepare tables and figures of infection rates and epidemiologic curves for reporting. The database can be used alone, or as part of the broader Toolkit. The complete IPAC Canada LTC Surveillance Toolkit, including a recorded tutorial on how to use the Toolkit, is available to IPAC Canada members and non-members alike.

**Conflict of interest:** None
4. The IPAC Canada Acute Care Surveillance Tracking Tool, adapted from the IPAC Canada LTC Surveillance Toolkit database tool, is a Microsoft Excel database. It is set up to automatically calculate rates of all infections and of those deemed to be healthcare-associated, as well as to prepare tables and figures of infection rates and epidemiologic curves for reporting. This Tool can be customized for use with any set of case definitions. The IPAC Canada Acute Care Surveillance Tracking Tool, and a recorded tutorial on how to use the Tool, are available to IPAC Canada members.

5. Surveillance Workshop sessions serve to provide a framework on what surveillance is, why it is important, and an overview of the six components to robust and effective surveillance system (planning and training, data collection, data cleaning and analysis, data interpretation and benchmarking, reporting and evaluation). Interactive exercises couched in acute care and LTC scenarios provide opportunities to apply some of the surveillance concepts presented, and to use some of the surveillance tools described above. Surveillance Workshop recordings and independent study materials are available to IPAC Canada members.

All IPAC Canada members are encouraged to explore each of these resources and take advantage of all that IPAC Canada has to offer to support surveillance practices.

REFERENCES


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