

Public health surveillance in Epidemiology

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Public health surveillance is core function in epidemiology. Through the history mankind came across many diseases that brought unbearable burden on our shoulders that cost us so many life's, due to that we gathered data on each disease for future preventions, and one of the aspect of these data gathering is epidemiology. By WHO Public health surveillance is the continuous, systematic collection, analysis and interpretation of health-related 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.

Public health surveillance is the ongoing, systematic collection, analysis, interpretation, and dissemination of health data to help guide public health decision making and action. Surveillance is equivalent to monitoring the "pulse" of the community.

The purpose of public health surveillance, which is sometimes called "information for action," is to portray the ongoing patterns of disease occurrence and disease potential so that investigation, control, and prevention measures can be applied efficiently and effectively.

Morbidity and mortality reports are common sources of surveillance data for local and state health departments. These reports generally are submitted by health-care providers, infection control practitioners, or laboratories that are required to notify the health department of any patient with a reportable disease.

surveillance provides information for action. One of the first actions that results from a surveillance case report or report of a cluster is investigation by the public health department.

Because surveillance can directly measure what is going on in the population, it is useful both for measuring the need for interventions and for directly measuring the effects of interventions. The purpose of surveillance is to empower decision makers to lead and manage more effectively by providing timely, useful evidence.

Surveillance information is analyzed by time, place, and person. Knowledgeable technical personnel should review data regularly to ensure their validity and to identify information of use to top managers. Simple tables and graphs are most useful for summarizing and presenting data. Timely dissemination of data to those who make policy and implement intervention programs is critical to the usefulness of surveillance data.

Public health surveillance is an essential tool for ministries of finance, ministries of health, and donors to effectively and efficiently allocate resources and manage public health

interventions. To be useful, public health surveillance must be approached as a scientific enterprise, applying rigorous methods to address critical concerns in this public health practice

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