case definition

case definition, in epidemiology, set of criteria used in making a decision as to whether an individual has a disease or health event of interest. Establishing a case definition is an imperative step in quantifying the magnitude of disease in a population. Case definitions are used in ongoing public health surveillance to track the occurrence and distribution of disease within a given area, as well as during outbreak investigations in field epidemiology.

A case definition must be clear, simple, and concise, allowing it to be easily applied to all individuals in the population of interest. It typically includes both clinical and laboratory characteristics, which are ascertained by one or many methods that might include diagnosis by a physician, completion of a survey, or routine population screening methods. Individuals meeting a case definition can be categorized as "confirmed," "probable," or "suspected."

National and international organizations have published lists of uniform case definitions for the mandatory reporting of select diseases. Such lists provide explicit case definitions, enabling clinicians to report cases for diseases of interest to public health authorities in a standard and uniform way across geographic locations. This is particularly useful for studies that compare the prevalence of disease across regions, since they can use the same case definitions and, therefore, obtain a relatively accurate assessment of disease.

During an outbreak of disease, a case definition is developed at an early stage of the outbreak investigation, facilitating the identification of individual cases. While the same criteria apply for developing a case definition in routine public health surveillance, in an outbreak investigation a case definition may also include information regarding person, place, and time, in addition to clinical and laboratory characteristics. For example, a case definition developed for an outbreak of foodborne illness may include only those individuals who ate at a certain restaurant during a specified period of time. Furthermore, a case definition may be broadly defined in the initial stages of an outbreak investigation scenario in order to increase sensitivity, permitting the recording of as many cases as possible while also minimizing the possibility of overlooking cases. As the

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investigation continues and more knowledge is gained about the nature of the cases, the definition may be narrowed, making it more specific. This is particularly important for a newly emerging disease where a standard case definition does not yet exist.

Kate Bassil

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