

EPIDEMIOLOGICAL ANALYSIS

Who is an epidemiologist?

An epidemiologist is a Masters in Public Health-prepared professional who specializes in the surveillance of disease trends and in investigating transmission sources of infectious diseases.



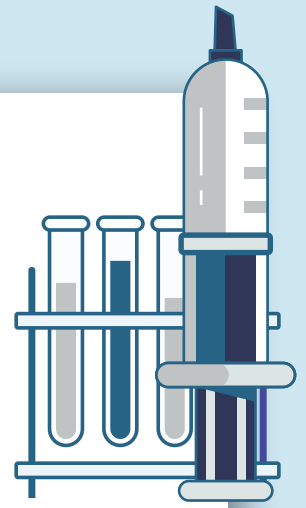
The Epidemiology team determines what study design to use to perform the analysis of the outbreak data to statistically prove and or disprove the exposure to the causative agent of the illness that resulted in the outbreak.

What do epidemiologists do?

Epidemiologists compile all data collected through the Environmental Health and Communicable Disease investigations and perform the analysis of the data using standard epidemiological processes.



THE EPIDEMIOLOGICAL ANALYSIS/PROCESS



One (1) of two (2) study designs are used during the epidemiological analysis: cohort study or case-control study.

- A cohort study is used in outbreaks where all exposed individuals are known. For example, an outbreak of illness is linked (exposure) to a wedding reception or a private party with a known guest list.
- A case-control study is used where exposed individuals are not all known. For example, an illness outbreak is linked (exposure) to a public restaurant or swimming at a public pool.

As data are collected throughout the investigation and analyzed, it is used by the team to develop a theory of contributing factors. The public's health risk is assessed, and recommendations are made to stop any further transmission of the pathogen causing illness by the Directors of Public Health Nursing, Environmental Health, and/or Veterinary Health to the Public Health Administrator until the outbreak is determined to be over.



An outbreak is determined to be over when 2 incubation periods (dependent on the pathogen) have been completed without any new cases linked to the outbreak source.

If a new case is identified within this incubation time frame the outbreak is ongoing with the timeframe reset to day zero (0) from the new onset date. For example, salmonella has an incubation period of 1-7 days, therefore, after day 14 from the last identified case, if there are no new cases linked to the outbreak, the outbreak will be declared over.

The completed Epidemiological data analysis is included in the final report.

