

What is epidemiology? Why is this important to community health? Provide an example of its importance from your community.

According to World Health Organization (2011), "Epidemiology is the study of the distribution and determinants of health-related states or events (including disease), and the application of this study to the control of diseases and other health problems. Various methods can be used to carry out epidemiological investigations: surveillance and descriptive studies can be used to study distribution; analytical studies are used to study determinants" (Epidemiology, para. 1). The WHO website posts a Weekly Epidemiology Record (WER) that is a resource for quickly and accurately accessing information about disease outbreaks and communicable diseases. The website also posts data tables by states, country statistics and publications with major analyses. You can even find the WHO website on Facebook at <http://www.facebook.com/WorldHealthOrganization?v=wall>

Epidemiology is important to community health because epidemiologists can determine patterns by looking at persons and places or frequency. Studying groups may assist with determining causes or etiology. The two types of rates are incidence and prevalence. An example might be the incidence of lung cancer is 100 per 100,000 per year (University of Phoenix, 2010)

#### References:

World Health Organization. (2011). *Health topics*. Retrieved from <http://www.who.int/topics/epidemiology/en>

University of Phoenix. (2010). Public Health 101 Chapter 2 Evidence-based Public Health. Retrieved from University of Phoenix, HCS 457 website.

#### Response 2

Epidemiology is a discipline that employs scientific methods and approaches to examine how disease is spread or distributed in a population. It is also a component used in an evidence-based health care approach consistent with the Problem, Etiology Recommendation Implementation (PERI) process. Epidemiologists investigate person and place factors to identify patterns as associated with disease prevalence and frequency. Group associations, risk indicators and markers are types of data collected and evaluated by epidemiologists to determine authenticity (real or artifactual). Data is summarized and presented in terms of incidence or prevalence rates.

Community health uses epidemiological studies to determine populations and groups that may have a higher susceptibility to certain diseases, conditions or environmental factors. These "at-risk" populations are examined in terms of incidence (chance of developing a disease over time) and prevalence (the number of individuals with a disease in a population). Together, these rates assist community health with determining mortality rates, where to focus resources, how to monitor effectiveness of existing programs and in reporting results to state and federal agencies. The Centers for Disease Control (CDC) compiles and

disseminates epidemiological statistics worldwide to assist other organizations like the World Health Organization to help fight the spread of disease overseas.

Local public health benefits from epidemiological investigations to fight the spread of location-specific diseases and conditions. Mining regions rely on reports focusing on air quality effects for coal dust. Urban areas may rely on information regarding diseases related to drug abuse (HIV/AIDS and hepatitis). Suburban areas, such and mine, may rely on studies focusing on teenage drinking, pregnancy and sexually transmitted disease.

Reference:

Riegelman, R. (2010). *Public Health 101: Healthy people - healthy populations*. Sudbury, MA Jones and Bartlet