*Descriptive Epidemiology* :

The goal of epidemiology is to establish causal factors for health issues in order to improve the health and safety of whole populations.

A population might refer to a town, a country, an age group, or a race.

Health issues refer to anything that might impact health in the present or future.

Data on who is most likely to be injured in car crashes is just as valuable a topic of study to epidemiologists as data on what part of the population is at most risk for developing complications from the flu.

In order to accomplish this, epidemiology has two main branches: analytical and descriptive.

Descriptive epidemiology evaluates and catalogs all the circumstances surrounding a person affected by a health event of interest.

Analytical epidemiologists use data gathered by descriptive epidemiology experts to look for patterns suggesting causation.

The end goal of both branches is to reduce incidence of health events or disease by understanding the risk factors for them.

Both analytical and descriptive epidemiology often serve public health organizations by providing them with information that may reduce disease or other health-impacting events.

The primary considerations for descriptive epidemiology are frequency and pattern.

Frequency evaluates the rate of occurrence, and pattern helps analytical epidemiologists suggest risk factors.

Descriptive epidemiology evaluates frequency and pattern by examining the person, place, and time in relationship to health events.

In person, descriptive epidemiology examines factors like age, education , socioeconomic status , availability of health services, race, and gender.

Person evaluations may also include gathering information on behaviors like drug abuse , shift work, eating and exercise patterns.

For example, in some studies, examinations of person behavior established a correlation between people who work night shifts and high blood pressure. Not every person who works the night shift will have high blood pressure, but shift work has been shown to increase the risk for developing the condition.

Another important evaluation in descriptive epidemiology is place.

Place can have different meanings depending upon individual descriptive epidemiology studies.

It might mean the geographic borders of a town, or the geographic features of an area.

Place evaluation might lead one to suggest that people who live near lakes teeming with mosquitoes are at higher risk for developing West Nile Virus.

Evaluation of place might also include where people work, the population numbers of a place (density), and the environments in which people live, work or attend school.

Time, to descriptive epidemiology, might refer to the time of year, or things that happen at a specific time each day or each hour.

People are more prone to getting the flu during the late fall and early winter months.

Prevalence of the flu during this period allows physicians to predict the most effective time to offer vaccinations.

Time considerations in descriptive epidemiology have also led to interesting studies on when health events are more likely.

The incidence of drunk driving accidents tends to increase around certain holidays, like Christmas increasing the risk of being injured or dying in a car crash at these times.

Descriptive epidemiology may also evaluate the connection of person to place and time.

If the crime rate in a city increases dramatically in a given year, it impacts certain health factors and is taken into consideration.

Any person living in the city has a higher probability of being the victim of crime during a year when crime levels rocket.

Periods of war in a geographical area affect person and place statistics as well.

The relationship between person, place and time helps create a more descriptive picture of certain health risks and must be considered in order to develop better patterns of health risks.

The more fully a descriptive epidemiologist can describe person, place and time, and any correlations between the three, the more likely patterns emerge which may be considered as risk factors for certain kinds of health issues.

The analytical epidemiologist then uses this data as an information source for people or to influence public policy .

Yet not all studies by epidemiologists are considered helpful.

A study that concludes people who work have higher risk factors for dying of heart attacks on Mondays may not change or influence health.

It might merely add to the stress people feel when they head to work Monday morning.