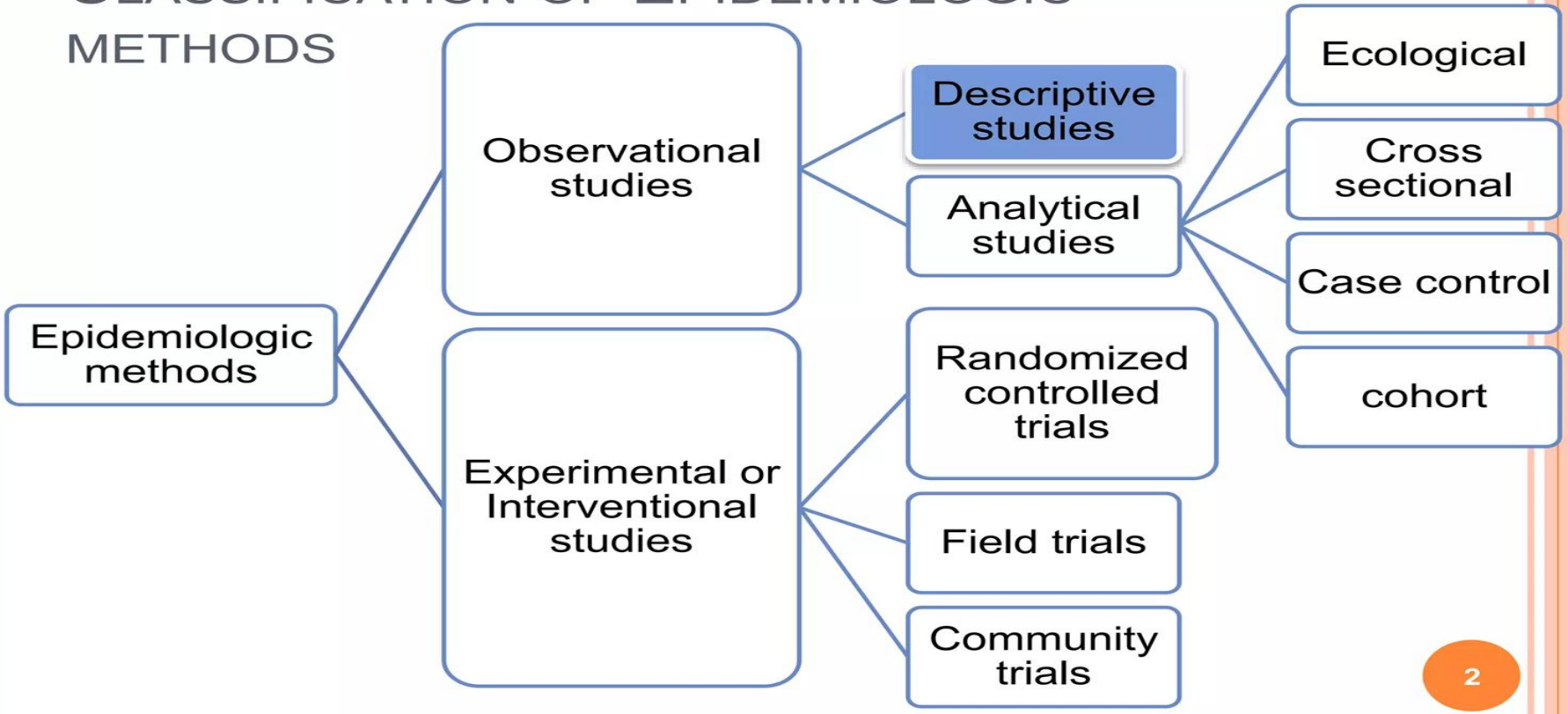
DESCRIPTIVE EPIDEMIOLOGY

Classification of Epidemiologic methods



DESCRIPTIVE EPIDEMIOLOGY

Descriptive epidemiology is concerned with observing the distribution of disease in human population and identifying the characteristics with which the disease seems to be associated.

It is the first phase of an epidemiological investigation

It uses observational studies of the distribution of disease in terms of person,place or time.

It describes the occurrence of disease in a population

Descriptive epidemiology describes the outbreak in terms of person, place and time.

- "Person" refers to socio-demographic characteristics of cases and includes variables such as age, ethnicity, sex/gender, occupation, and socioeconomic status.
- "Place" refers to spatial relationships that are important in describing the occurrence of illnesses and may include variables that describe clustering, rural-urban status, city, province/territory, or country.
- "Time" refers to the examination of when and over what time period the illnesses occur and may describe a point source epidemic, secular trends, or temporal clustering.

STEPS INVOLVED IN DESCRIPTIVE STUDIES

1. Defining the population which has to be studies
2. Defining the disease under study.
3. Describing the disease in terms of place, time and person
4. Measurement of the disease
5. Formulation of aetiological hypothesis

1. DEFINING THE POPULATION

Descriptive studies are investigations of human population

A defined population should not only be in terms of total no. but also in terms of age,sex, occupation, etc.

The "defined population" can be the whole population in a geographic area,or more often a representative sample taken from it.

The population chosen should be stable,without migration into or out of the area.

2. DEFINING THE DISEASE UNDER STUDY

The epidemiologist look out for an "operational definition"

Its a definition by which the disease or condition can be identified and measured in a defined population with a degree of accuracy.

This is required so as to enable observer to identify those who have the disease from those who do not have.

3 DESCRIBING THE DISEASE

The primary objective of descriptive epidemiology is to describe the occurrence and distribution of disease by time,place and person and identifying those characteristics asssociated with presence or absence of disease in an individual.

4. MEASUREMENT OF DISEASE:

- Amount of disease or disease load in terms of mortality or morbidity.
- Measurement of morbidity:

a) Incidence(longitudinal study)
b) Prevalence(cross-sectional study)

5. FORMULATION OF HYPOTHESIS

- A hypothesis is an ‘educated guess’ and an ‘unproven idea’,based on observation.
- It can be accepted or rejected ,using the technique of analytical or interventional/experimental epidemology.

USES OF DESCRIPTIVE EPIDEMIOLOGY

- Helps to know magnitude of disease in community.
- Helps to know the distribution of disease.
- Helps to formulate an aetiological hypothesis.
- Helps to plan ,organise and implement curative and preventive services.
- Helps in doing research.