



Notes



$$\text{Rate} = \frac{\text{Number of cases}}{\text{Population of the area in specific time period}} \times 100$$

Ratio
 Is a relative No. that express the magnitude of one occurrence in relation to the other.
 (2 independents Groups)

$$\frac{a}{b}$$

Secondary attack rate =

$$\frac{\text{No. of secondary cases occurring within the accepted incubation period following exposure to a primary case}}{\text{No. of exposed susceptible}} \times 100$$

I = incidence / D = duration / P= Prevalence

$$\text{Prevalence} = I * D$$

P =
$$\frac{\text{No. of existing cases of a disease}}{\text{total population at risk at a given point in time}} \times 100$$

Period Prevalence =

$$\frac{\text{No. of existing cases of a disease within time period}}{\text{Average study population within time period}} \times 1000$$

Point Prevalence =

$$\frac{\text{No. of existing cases of the disease at a point in time}}{\text{Total study population at a point in time}} \times 1000$$

Incidence rate =

$$\frac{\text{No. of new cases of a disease within a population in a given time period}}{\text{No. of persons exposed to risk of developing the disease in the same time period}} \times 1000$$

وما
النصر
إلا
صبر
ساعة



وما

النصر

إلا

صبر

ساعة



Crude death rate: =

$$\frac{\text{No of deaths in certain population in a year \& locality}}{\text{No of population in the same year and locality}}$$

A. Age Specific Death Rate:

$$\frac{\text{No. of persons dying in a certain age and a certain year and area} \times 1000}{\text{Total No of the same age group in the same year and same area}}$$

B. Sex Specific Death Rate:

$$\frac{\text{No of deaths in a certain sex during a year in a certain locality} \times 1000}{\text{Total No of the same sex during the same year \& locality}}$$

3. Cause Specific Mortality Rate=

$$\frac{\text{Total No of deaths due to a certain cause during a year and a given locality} \times 100}{\text{Estimated midyear population during the same year \& locality}}$$

4. Case Fatality Rate=

$$\frac{\text{Total No. of deaths from certain disease in specific time \& place} \times 1000}{\text{Total No of those having the same disease in the same time \& place}}$$

5. Proportionate Mortality Rates=

$$\frac{\text{Total No of deaths due to a certain cause during a year in given locality} \times 1000}{\text{Total No of deaths from all causes during the same year \& locality}}$$

DALY = YLL + YLD

disability-adjusted life year (DALY)

years of life lost (YLLs) + years of healthy life lost due to disability (YLDs)

Relative risk = incidence a / incidence b

Attributable risk = $\frac{\text{incidence a} - \text{incidence b}}{\text{incidence a}}$

$$PAR = I_T - I_0$$

I_T is the incidence rate in the population

I_0 is the incidence rate in the unexposed group

$$PAR\% = \frac{PAR}{I_T} \times 100$$

$$OR = \frac{a/c}{b/d} = \frac{ad}{bc}$$