Epidemiology of Non-Communicable Diseases

 Noncommunicable diseases (NCDs) are the leading cause of death globally, and one of the major health challenges of the 21st century. NCDs are the leading cause of death worldwide. In 2016 ,they were responsible for 71% (41 million) of the 57 million deaths which occurred globally. The major NCDs responsible for these deaths included cardiovascular diseases accounting for 44% of all NCD deaths and 31% of all global deaths; cancers 22% of all NCD deaths and 16% of all global deaths; chronic respiratory diseases 9% of all NCD deaths and 7% of all global deaths; and diabetes 4% of all NCD deaths and 3% of all global deaths. The global probability of dying from one of the four main NCDs among 30-69 years old in 2016 was 18%, with a slightly higher risk for males(%22) than for females (15%).

NCDs definition: An impairment of bodily structure and function that necessitates a modification of the patient's normal life, and has persisted over an extended period of time.

NCDs Characteristics

 •Absence of known etiological agent.

 •Multifactorial causation – absence of one to one cause but "risk factors."

 •Long latency period. Period between 1ˢᵗ exposure to suspected factor and eventual development of disease.

4. Indefinite onset- Slow

*Risk factors- factors that are positively associated with the risk of development of a disease but are not sufficient to cause the disease.

Current status and trends in risk factors

The four major NCDs (cardiovascular disease, cancer, chronic respiratory disease, and diabetes) are causally linked with four leading behavioural risk factors: tobacco use, harmful use of alcohol, physical inactivity, and unhealthy diet. In turn, these behaviours lead to four key metabolic/physiological changes: raised blood pressure, overweight/obesity, raised blood glucose, and raised blood lipids. Environmental air pollution is also a key risk factor.

Prevention of NCDs

Primordial - Anti-smoking, alcohol, drug abuse laws and legislation.

Primary- Health promotion, modification of risk factors e.g. physical activity, relaxation & rest, good nutrition, emotional stability-avoidance of stress, health education, avoidance of exposure to harmful substances

Secondary- Screening, case finding

Tertiary- Limit disability and rehabilitation (medical, social, vocational & economic)

Classifications of Communicable Diseases

Communicable diseases may be classified by a variety of methods:

- Clinical signs& symptoms (respiratory, digestive, skin, eye… etc.)
- Based on the mode of transmission of the infectious agent, communicable diseases can be classified as:

Waterborne diseases: transmitted by ingestion of contaminated water.

Foodborne diseases: transmitted by the ingestion of contaminated food.

Airborne diseases: transmitted through the air.

Vector-borne diseases: transmitted by vectors, such as mosquitoes and flies.

- methods of prevention (e.g., vaccine preventable)
- Etiology classification: viral, bacterial, fungal, and parasitic disease.
- Occurrence classification: (epidemic, endemic, pandemic, sporadic)