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INTRODUCTION TO PUBLIC HEALTH AND EPIDEMIOLOGY (1)

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At the end of THE session the student should be able to:

- Describes the historical context
- Define scope and terminology

- Identify what questions can epidemiology answer and its uses
 - The Historical Context
- Epidemiology originates from Hippocrates' observation more than 2000 years ago
- it was not until the nineteenth century that the distribution of disease in specific human population groups was measured to any large extent.
- The finding by John Snow
- Deaths from cholera in districts of London supplied by two water companies, 8 July to 26 August 1854

- Richard Doll and Andrew Hill studied the relationship between tobacco use and lung cancer, beginning in the 1950s.
- The British doctors' cohort has also shown a progressive decrease in death rates among non-smokers over subsequent decades.
- Definition, scope, and uses of epidemiology
- The word “epidemiology” is derived from the Greek words: epi “upon”, demos “people” and logos “study”.

- Last defined epidemiology as “the study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the prevention and control of health problems”
- It is the basic science in preventive and social medicine.
- Covers health and health related diseases.
- Provides new opportunities for prevention, treatment, planning and improving health services.

- Scope

- A focus of an epidemiological study is the population defined in geographical or other terms; for example, a specific group of hospital patients or factory workers could be the unit of study.

- A common population used in epidemiology is one selected from a specific area or country at a specific time. This forms the base for defining subgroups with respect to sex, age group or ethnicity.

- Aims of Epidemiology

- To describe distribution and magnitude of health problems.

- To identify aetiological (risk) factors.
- To provide data for planning.
 - “the ultimate aim is to lead effective action:
 - (a) to eliminate or reduce the health problems and
 - (b) to promote health.
- Epidemiological Approach
- It based on 2 major foundations:
 - Asking questions.
(what, where, when, why, who, how)
 - Making comparisons.

(between groups,
comparability)

- Tools of Measurements

- Rates
- Ratios
- Proportions

- Epidemiology and Clinical
medicine

Epidemiology and public .
health

- Public health is collective actions to improve population health.

- Epidemiology is used in several ways as a tools for improving public health.
- Early studies in epidemiology were concerned with the causes (etiology) of communicable diseases, and such work continues to be essential since it can lead to the identification of preventive methods.
- In this sense, epidemiology is a basic medical science with the goal of improving the health of populations,
- Diabetes, for example, has both genetic and environmental components.
- We define environment broadly to include any biological, chemical, physical, psychological, economic or cultural factors that can affect health.

- Personal behaviours affect this interplay, and epidemiology is used to study their influence and the effects of preventive interventions through health promotion.

Causation of disease.

- Although some diseases are caused solely by genetic factors, most result from an interaction between genetic and environmental factors.