* **INTRODUCTION TO PUBLIC HEALTH AND EPIDEMIOLOGY (1)**
* By: Dr Khalid El Tohami
* 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.