Al-Mustaqbal University / Nursing College
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Epidemiology

Lecture 8

Analytic Epidemiology

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analytic epidemiology

- A second type of investigation, analytic epidemiology, goes beyond simple description or observation
- seeks to identify associations between a particular human disease or health problem and its possible causes.

Analytic epidemiology

- Analytic studies tend to be more specific than descriptive studies in their focus.
- They test hypotheses or seek to answer specific questions

Purposes of Analytic epidemiology

Its purposes are to

- suggest mechanisms of causation
- generate etiologic (causal) hypotheses
- test those hypotheses.

Types of Analytic studies

Analytic studies divided into three types:

- **prevalence studies.**
- **case-control studies.**
- **cohort studies**.

Prevalence Studies

- When examining prevalence, it is helpful to remember that the health condition may be new or may have affected some people for many years.
- It may examine causal factors, but a prevalence study always looks at factors from the same point in time and in the same population.

Case-control Studies

- A case-control study compares people who have a health or illness condition (number of cases with the condition) with those who lack this condition (controls).

Case-control Studies

These studies begin with the cases and look back over time (**retrospectively**) for presence or absence of the suspected causal factor in both cases and controls.

For example, we might compare people who develop bladder cancer with those who do not with respect to their smoking behavior.

Cohort Studies

- A cohort is a group of people who share a common experience in a specific time period.

Cohort Studies

- Cohort studies, rather than measuring the relationship of variables in existing conditions, study the development of a condition over time.

Cohort Studies

- In studying a disease, the cohort might include individuals who are initially free of the disease but are known to have been exposed to a particular factor.

Cohort Studies

- They would be observed over time to evaluate which variables were associated with the development or nondevelopment of the disease.
- Cohort studies, also called **prospective or longitudinal studies**
- **For example**, we might follow a group of smokers over time to determine how many of them develop bladder cancer.

Big Thanks