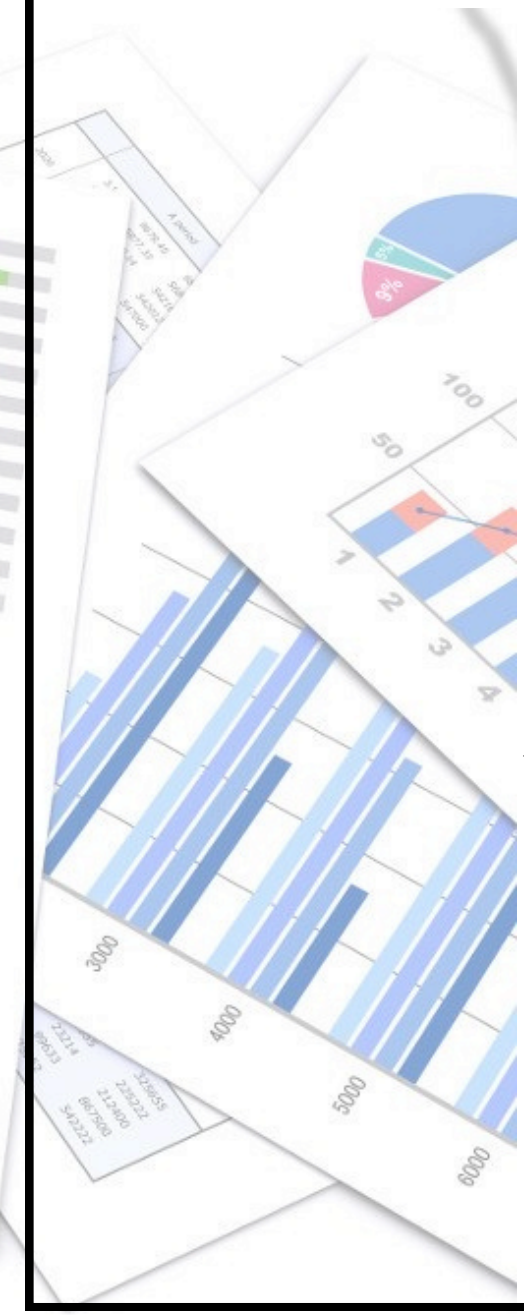
Biostatistics

Archive

Lecture 18



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لجنة الطب والجراحة

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1.**Which statement best captures the essence of epidemiology as defined in the document?**

A) It exclusively focuses on infectious diseases in urban populations.
B) It studies health outcomes exclusively related to chronic diseases like cancer.
C) It investigates both disease and health outcomes across various human populations.
D) It primarily aims to develop therapeutic interventions for diseases.
E) It is limited to analyzing historical data on disease outbreaks.

Answer:c ::

2.**In epidemiological research, which of the following goals is most closely associated with controlling disease distributions?**

A) Only describing the frequency of diseases within populations.
B) Predicting future disease occurrences without intervention strategies.
C) Eradicating existing cases and preventing new occurrences through health initiatives.
D) Solely focusing on the social determinants of health.
E) Establishing a comprehensive database of disease incidence.

Answer:c

1.**Which of the following is a significant limitation of cross-sectional studies?**

A) They can easily establish cause-and-effect relationships.
B) They provide insights into the temporal relationship between exposure and disease.
C) They measure prevalence rather than incidence, limiting their applicability.
D) They are ideal for studying rare diseases with short durations.
E) They require extensive follow-up periods to gather data.

Answer:c

4.**In the context of case-control studies, which of the following statements is accurate regarding the selection process?**

A) Cases and controls can be selected from different populations to enhance variability.
B) Controls should reflect the same exposure status as the cases to ensure comparability.
C) The selection of controls must be based on their disease status rather than their exposure.
D) Cases should be chosen based on a clearly defined diagnostic criterion.
E) Controls are irrelevant in the analysis of case-control studies.

Answer:d

5.**What does an Odds Ratio (OR) greater than 1 imply regarding exposure in case-control studies?**

A) The exposure is protective against the disease.
B) There is no association between exposure and disease.
C) The exposure increases the likelihood of disease occurrence.
D) The exposure has no relevance in the context of disease risk.
E) The relationship between exposure and disease is indeterminate.

Answer:c

6.**Which of the following best describes the characteristics of cohort studies?**

A) They are typically retrospective and rely on historical data.
B) They start with individuals who are already diagnosed with the disease.
C) They assess exposure at baseline and follow up on disease status later.
D) They are primarily concerned with measuring prevalence rather than incidence.
E) They require a smaller sample size than case-control studies.

Answer:c

7.**What is a primary advantage of using descriptive studies in epidemiological research?**

A) They can definitively establish cause-and-effect relationships.
B) They are the most efficient design for studying rare diseases.
C) They provide detailed insight into the occurrence of health outcomes.
D) They can identify risk factors with a high level of precision.
E) They require extensive resources and long-term follow-up.

Answer:c

8.**in the analysis of incidence rates, which of the following formulas correctly represents the calculation for incidence among the exposed group?**

A) $\frac{c}{c+d}$
B) $\frac{a}{a+b}$
C) $\frac{b}{a+c}$
D) $\frac{d}{b+d}$
E) $\frac{a+b}{c+d}$

Answer:b

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9.**Which statement best describes the weaknesses associated with case-control studies?**

A) They require a very large sample size and extensive follow-up.
B) They can directly estimate the risk of disease occurrence.
C) They are subject to biases such as recall and selection bias.
D) They are not suitable for studying rare exposures.
E) They measure incidence rather than prevalence effectively.

Answer: c

10. What is the significance of the Relative Risk (RR) calculation in cohort studies?

A) It provides a direct estimate of the odds of exposure.
B) It compares the incidence of disease among exposed and non-exposed groups.
C) It is used only for descriptive studies.
D) It reflects the prevalence of the disease in the population.
E) It is irrelevant in establishing causal relationships.

Answer:**b**

11.Which of the following best describes the primary goal of epidemiological research?

A) To solely identify the most prevalent diseases in a population
B) To predict the incidence of diseases without considering risk factors
C) To establish causal relationships between exposures and health outcomes
D) To describe the health status of populations without formulating hypotheses
E) To control the distribution of diseases through immediate medical interventions

Answe:cr

12.in case-control studies, which of the following is true regarding the selection of controls?

A) Controls should be selected from a different population to ensure diversity.
B) Controls must be representative of the population at risk for the disease.
C) Controls can have the disease but should not be aware of their status.
D) Controls should be selected based on their exposure status.
E) Controls are not necessary for properly conducted case-control studies.

Answer:b

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13.**Which of the following statements about cohort studies is accurate?**

A) Cohort studies are primarily retrospective in nature.
B) They can establish cause-effect relationships more reliably than case-control studies.
C) They are most useful when diseases are common and easily tracked.
D) Cohort studies typically require a smaller sample size than case-control studies.
E) Loss to follow-up is not a concern in cohort studies.

Answer:b

14.**n the context of the Odds Ratio (OR), which interpretation is correct if the calculated OR is greater than 1?**

A) Exposure is likely to be a protective factor for the disease.
B) There is no association between exposure and disease occurrence.
C) Exposure increases the odds of having the disease.
D) The exposure has no relevance to the disease risk.
E) The disease is equally likely regardless of exposure status.

Answer: c

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