

Epidemiology by Gordis Leon

1. A case-control study is characterized by all of the following *except*:

- a. It is relatively inexpensive compared with most other epidemiologic study designs.
- b. Patients with the disease (cases) are compared with persons without the disease (controls.)
- c. Incidence rates may be computed directly
- d. Assessment of past exposure may be biased
- e. Definition of cases may be difficult

Answer: C

2. Residents of three villages with three different types of water supply were asked to participate in a survey to identify cholera carriers. Because several cholera deaths had occurred recently, virtually everyone present at the time underwent examination. The proportion of residents in each village who were carriers was computed and compared. What is the proper classification for this study?

- a. Cross-sectional study.
- b. Case-control study.
- c. Prospective cohort study.
- d. Retrospective cohort study.
- e. Experimental study.

Answer: A

3. Which of the following is a case-control study?

- a. Study of past mortality or morbidity trends to permit estimates of the occurrence of disease in the future
- b. Analysis of previous research in different places and under different circumstances to permit the establishment of hypotheses based on cumulative knowledge of all known factors
- c. Obtaining histories and other information from a group of known cases and from a comparison group to determine the relative frequency of a characteristic or exposure under study
- d. Study of the incidence of cancer in men who have quit smoking
- e. Both *a* and *c*

Answer: C

4. In a study begun in 1965, a group of 3,000 adults in Baltimore were asked about alcohol consumption. The occurrence of cases of cancer between 1981 and 1995 was studied in this group. This is an example of:

- a. A cross-sectional study
- b. A prospective cohort study
- c. A retrospective cohort study
- d. A clinical trial
- e. A case-control study

Answer: B

5. In a small pilot study, 12 women with endometrial cancer (cancer of the uterus) and 12 women with no apparent disease were contacted and asked whether they had ever used estrogen. Each woman with cancer was matched by age, race, weight, and parity to a woman without disease.

What kind of study design is this?

- a. Prospective cohort study
- b. Retrospective cohort study
- c. Case-control study
- d. Cross-sectional study
- e. Experimental study

Answer: C

6. The physical examination records of the entire incoming freshman class of 1935 at the University of Minnesota were examined in 1977 to see if their recorded height and weight at the time of admission to the university was related to the development of coronary heart disease by 1986. This is an example of:

- a. A cross-sectional study
- b. A case-control study
- c. A prospective cohort study
- d. A retrospective cohort study
- e. An experimental study

Answer: D

7. In a case-control study, which of the following is true?

- a. The proportion of cases with the exposure is compared with the proportion of controls with the exposure
- b. Disease rates are compared for people with the factor of interest and for people without the factor of interest
- c. The investigator may choose to have multiple comparison groups
- d. Recall bias is a potential problem
- e. *a, c, and d*

Answer: E

8. In which one of the following types of study designs does a subject serve as his own control?

- a. Prospective cohort study
- b. Retrospective cohort study
- c. Case-cohort study
- d. Case-crossover study
- e. Case-control study

Answer: D

9. Ecologic fallacy refers to:

- a. Assessing exposure in large groups rather than in many small groups
- b. Assessing outcome in large groups rather than in many small groups
- c. Ascribing the characteristics of a group to every individual in that group
- d. Examining correlations of exposure and outcomes rather than time trends
- e. Failure to examine temporal relationships between exposures and outcomes

Answer: C

10. In cohort studies of the role of a suspected factor in the etiology of a disease, it is essential that:

- a. There be equal numbers of persons in both study groups
- b. At the beginning of the study, those with the disease and those without the disease have equal risks of having the factor
- c. The study group with the factor and the study group without the factor be representative of the general population
- d. The exposed and nonexposed groups under study be as similar as possible with regard to possible confounding factors
- e. Both *b* and *c*

Answer: D

11. Which of the following is *not* an advantage of a prospective cohort study?

- a. It usually costs less than a case-control study
- b. Precise measurement of exposure is possible
- c. Incidence rates can be calculated
- d. Recall bias is minimized compared with a case-control study
- e. Many disease outcomes can be studied simultaneously

Answer: A

12. Retrospective cohort studies are characterized by all of the following *except*:

- a. The study groups are exposed and non-exposed
- b. Incidence rates may be computed
- c. The required sample size is smaller than that needed for a prospective cohort study
- d. The required sample size is similar to that needed for a prospective cohort study
- e. They are useful for rare exposures

Answer: C

13. A major problem resulting from the lack of randomization in a cohort study is:

- a. The possibility that a factor that led to the exposure, rather than the exposure itself, might have caused the disease
- b. The possibility that a greater proportion of people in the study may have been exposed
- c. The possibility that a smaller proportion of people in the study may have been exposed
- d. That, without randomization, the study may take longer to carry out
- e. Planned crossover is more likely

Answer: A

14. In a cohort study, the advantage of starting by selecting a defined population for study before any of its members become exposed, rather than starting by selecting exposed and non-exposed individuals, is that:

- a. The study can be completed more rapidly
- b. A number of outcomes can be studied simultaneously
- c. A number of exposures can be studied simultaneously
- d. The study will cost less to carry out
- e. *a* and *d*

Answer: C