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| 37 | A | B | C | D | E |
| 38 | A | B | C | D | E |
| 39 | A | B | C | D | E |

## PRACTICE QUESTIONS

SCFHS Remote

# COMED

Preventive Medicine

EDITION

Original Demo

QUESTIONS

15

ISSUED

October 14, 2026

# Before you begin

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## What this is

15 practice questions for SCFHS Remote **COMED**, each with its answer key and an explanation. Answer a question before you read its key - the explanation is worth more once you have committed.

## If something looks wrong

Send us three things and we will check it:

- the exam code, **COMED**
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

## Licence

Original Mometrix demo. This free sample contains fewer questions than the full paid edition.

**QUESTION 1**

SINGLE CHOICE

A public health team is planning a vaccination campaign against measles in a region that has experienced a recent outbreak. Which of the following vaccination strategies provides the most immediate impact on interrupting measles transmission in the population?

- ☐ A Routine infant immunization at 9 months
- ☒ B Catch-up campaign targeting children aged 9 months to 15 years
- ☐ C Booster dose for adults aged 20-40 years
- ☐ D Selective immunization of healthcare workers

**ANSWER B**

**WHY** Measles outbreaks often occur due to accumulation of susceptible individuals over time (susceptibility pool). A catch-up campaign targeting all children and adolescents aged 9 months through 15 years rapidly closes immunity gaps and interrupts transmission. The WHO-recommended measles outbreak prevention/control strategy includes catch-up (one-time broad age range), keep-up (routine immunization), and follow-up (periodic) campaigns. Catch-up provides the most immediate impact on transmission in outbreak settings.

**QUESTION 2**

SINGLE CHOICE

According to the Declaration of Alma-Ata, which of the following best describes the central goal of Primary Health Care?

- ☐ A To provide specialized curative services through tertiary hospitals
- ☒ B To achieve 'Health for All' by the year 2000 through essential health care based on practical, scientifically sound, socially acceptable methods
- ☐ C To privatize health services and promote competition among providers
- ☐ D To focus exclusively on vertical disease-control programs
- ☐ E To provide health care only to vulnerable populations such as children and pregnant women

**ANSWER B**

**WHY** The Declaration of Alma-Ata (1978) defined primary health care as essential health care based on practical, scientifically sound, socially acceptable methods made universally accessible, with the central goal of 'Health for All by the year 2000'. Alma-Ata emphasized community participation, intersectoral action, and equitable distribution of health resources.

**QUESTION 3**

SINGLE CHOICE

A researcher wants to study whether long-term exposure to traffic-related air pollution is associated with the development of asthma in children. Which study design is most appropriate for establishing a temporal relationship and calculating incidence rates?

- ☐ A Cross-sectional study
- ☐ B Case-control study
- ☒ C Prospective cohort study
- ☐ D Ecological study

**ANSWER C**

**WHY** A prospective cohort study follows exposed and unexposed groups forward in time, allowing the investigator to establish temporality and calculate incidence rates of asthma. Cross-sectional designs assess exposure and outcome at the same time and cannot establish causation. Case-control studies start from cases and controls and measure prior exposure, but they estimate odds ratios rather than incidence. Ecological studies use group-level data and are vulnerable to the ecological fallacy.

**QUESTION 4**

SINGLE CHOICE

A new screening test is evaluated against the gold standard in a population of 1,000 people. The gold standard identifies 100 people as truly diseased. The new test correctly identifies 90 of these diseased people. What is the sensitivity of the new test?

- ☐ A 90 / 900
- ☒ B 90 / 100
- ☐ C 810 / 900
- ☐ D 90 / 190
- ☐ E 100 / 1,000

**ANSWER B**

**WHY** Sensitivity = true positives / (true positives + false negatives) = true positives / total diseased. Among the 100 truly diseased individuals, the new test correctly identifies 90, so sensitivity =  $90 / 100 = 90\%$ . Option A calculates specificity, option C is the false negative rate complement among non-diseased, and option D mixes diseased and non-diseased groups.

**QUESTION 5**

MULTIPLE CHOICE

Following confirmation of a cluster of foodborne salmonellosis linked to a local restaurant, which of the following are core public health actions required to control the outbreak? (Choose two.)

- ☒ A Establish active case finding and surveillance for new cases
- ☒ B Recall implicated food items and inspect the restaurant kitchen
- ☐ C Wait for the outbreak to subside before notifying the public health authority
- ☐ D Discontinue laboratory confirmation of clinical cases to save resources

**ANSWER A • B**

**WHY** Active case finding and surveillance (A) and source control through food recall and inspection of the implicated premises (B) are essential outbreak control actions. Notification of the public health authority must be prompt, not delayed (so C is wrong), and laboratory confirmation should continue, not be stopped (so D is wrong).

**QUESTION 6**

SINGLE CHOICE

Which of the following Wilson and Jungner criteria is considered a prerequisite when deciding whether a disease is suitable for population screening?

- ☐ A The disease must be rare and untreatable
- ☐ B The screening test must be inexpensive but not necessarily acceptable
- ☒ C The condition should be an important health problem with an accepted treatment
- ☐ D Screening should be performed only once at birth

**ANSWER C**

**WHY** Wilson and Jungner's classic criteria state that screening is justified when the condition is an important health problem, there is an accepted treatment for those identified, and facilities for diagnosis and treatment are available. The other options contradict the criteria: a disease suitable for screening must be important and treatable, the test must be acceptable (not only cheap), and screening programs typically involve repeated testing of defined age/risk groups.

**QUESTION 7**

SINGLE CHOICE

Which of the following is the most appropriate measure of association for assessing the relationship between a rare exposure and a chronic disease such as cancer in an epidemiological study?

- ☐ A Incidence rate in the exposed divided by incidence rate in the unexposed
- ☐ B Risk ratio comparing cumulative incidence between exposed and unexposed cohorts
- ☒ C Odds ratio from a case-control study
- ☐ D Absolute risk reduction from a randomized controlled trial

**ANSWER C**

**WHY** Case-control studies are the most efficient design for studying rare diseases or diseases with long latency, such as most cancers. The odds ratio is the appropriate measure of association in case-control studies. Cohort designs (risk ratio, rate ratio) are more suitable for common diseases with shorter latency; randomized trials measure absolute or relative risk reduction but are not typically used to investigate rare chronic disease etiology.

**QUESTION 8**

SINGLE CHOICE

In a case-control study of 400 patients with bladder cancer and 400 controls without bladder cancer, 320 cases and 80 controls report a history of long-term cigarette smoking. What is the odds ratio for the association between smoking and bladder cancer?

- ☐ A 0.25
- ☐ B 1.5
- ☐ C 4.0
- ☒ D 16.0
- ☐ E 24.0

**ANSWER D**

**WHY** Odds ratio in a case-control study =  $(a \times d) / (b \times c)$ , where  $a$  = exposed cases = 320,  $b$  = exposed controls = 80,  $c$  = unexposed cases = 80,  $d$  = unexposed controls = 320.  $OR = (320 \times 320) / (80 \times 80) = 102,400 / 6,400 = 16$ . An OR of 16 indicates a strong association between smoking and bladder cancer, consistent with established epidemiological evidence.

**QUESTION 9**

SINGLE CHOICE

According to the WHO STEPwise approach to chronic disease risk factor surveillance, which of the following behavioral risk factors is routinely assessed in STEP 1?

- ☐ A Blood pressure measurement
- ☐ B Fasting blood glucose measurement
- ☒ C Tobacco use
- ☐ D Lipid profile measurement
- ☐ E Anthropometric measurement

**ANSWER C**

**WHY** In the WHO STEPwise framework, STEP 1 collects self-reported information on key behavioral risk factors including tobacco use, alcohol consumption, physical inactivity, and diet. Blood pressure (STEP 2), anthropometry (STEP 2), and biochemical measurements such as glucose and lipids (STEP 3) are not part of STEP 1.

**QUESTION 10**

SINGLE CHOICE

A proposed screening program for a rare congenital metabolic disorder is being evaluated using the Wilson and Jungner criteria. The disease has a long latent period, an accepted treatment is available, and the screening test has high sensitivity and specificity, but the prevalence in the population is extremely low. Which characteristic is most likely to limit the usefulness of this screening program?

- ☐ A Long latent period of the disease
- ☒ B Low prevalence in the target population
- ☐ C High specificity of the screening test
- ☐ D Availability of an accepted treatment

**ANSWER B**

**WHY** Even when a disease is important and a good test exists, low prevalence markedly reduces the positive predictive value, so few positive results will be true positives and most will be false positives. This limits the population-level benefit of the screening program and is the key criterion that is not met in this scenario.

**QUESTION 11**

SINGLE CHOICE

A new screening test is evaluated against the gold standard in 1,000 patients: 200 truly diseased and 800 truly non-diseased. The test is positive in 180 diseased and 80 non-diseased individuals. What is the specificity of the test?

- ☒ **A** 90%
- ☐ **B** 80%
- ☐ **C** 10%
- ☐ **D** 72%

**ANSWER A**

**WHY** Specificity = true negatives / (true negatives + false positives) =  $(800 - 80)/800 = 720/800 = 90\%$ .  
Sensitivity in this scenario would be  $180/200 = 90\%$  as well, but the question specifically asks for specificity.

**QUESTION 12**

MULTIPLE CHOICE

A 45-year-old woman with no symptoms and no known risk factors attends a primary health care center for a routine check-up. The family physician measures her blood pressure, fasting glucose and lipid profile and counsels her on healthy diet and physical activity. Which of the following levels of prevention does this represent? (Choose two.)

- ☒ **A** Primordial prevention through promotion of healthy lifestyle
- ☒ **B** Primary prevention through risk-factor counseling and screening for asymptomatic disease
- ☐ **C** Secondary prevention through early detection of established disease in symptomatic patients
- ☐ **D** Tertiary prevention through rehabilitation after a cardiovascular event

**ANSWER A - B**

**WHY** Promoting a healthy diet and physical activity in an asymptomatic individual is primordial prevention (preventing the development of risk factors). Screening an asymptomatic adult for hypertension, diabetes and dyslipidemia is primary/secondary prevention (depending on whether risk factors or early disease are detected). Tertiary prevention applies after an established disease event, and secondary prevention strictly means detecting disease in asymptomatic individuals, which the screening component fulfills here.

**QUESTION 13**

MULTIPLE CHOICE

According to the WHO Expanded Programme on Immunization (EPI) and standard childhood immunization schedules, which of the following vaccines are routinely recommended for all infants as part of the basic immunization schedule in most countries? (Choose two.)

- ☒ **A** Bacillus Calmette-Guérin (BCG) vaccine at birth
- ☐ **B** Yellow fever vaccine for all newborns in non-endemic regions
- ☒ **C** Measles-containing vaccine as part of the infant schedule
- ☐ **D** Cholera vaccine as a routine infant immunization in all settings

**ANSWER A - C**

**WHY** The WHO EPI basic schedule includes BCG and a birth dose of oral polio vaccine, followed by DTP, polio, Hib, hepatitis B, pneumococcal, rotavirus, and a measles-containing vaccine (typically at 9-12 months). Yellow fever vaccine is only recommended in endemic countries, and cholera vaccine is not part of routine infant immunization globally (it is used in outbreak or endemic-area campaigns).

**QUESTION 14**

SINGLE CHOICE

According to the WHO/ISH risk prediction charts used in primary prevention, which of the following risk factors is required to estimate the 10-year risk of a fatal or non-fatal major cardiovascular event?

- ☐ **A** Family history of premature coronary heart disease
- ☒ **B** Serum total cholesterol
- ☐ **C** Body mass index (BMI)
- ☐ **D** Physical activity level

**ANSWER B**

**WHY** The WHO/ISH risk charts require age, sex, smoking status, systolic blood pressure, and serum total cholesterol (or, where unavailable, BMI is used as a proxy). Total cholesterol is a core required input; BMI is used only as a substitute when cholesterol is not measured. Family history and physical activity level are important clinical considerations but are not required variables in the risk chart calculation.

**QUESTION 15**

SINGLE CHOICE

A district health office establishes a surveillance system to monitor confirmed cases of tuberculosis, with mandatory weekly reporting from all public and private health facilities. Which of the following best characterizes this type of surveillance system?

- ☐ A Sentinel surveillance
- ☐ B Active surveillance
- ☒ C Passive surveillance
- ☐ D Syndrome-based surveillance

**ANSWER C**

**WHY** Passive surveillance relies on health care providers and facilities to routinely report cases of specified diseases to public health authorities, without active case-finding by the health department. Sentinel surveillance collects data from selected reporting sites only. Active surveillance involves health authorities proactively seeking out cases. Syndrome-based surveillance tracks clinical syndromes rather than confirmed diagnoses. Mandatory reporting from all facilities for confirmed TB defines passive surveillance.