

## PUBLIC HEALTH AND GENERAL PREVENTIVE MEDICINE

### BOOKS

- Friis, R.H.: Essentials of Environmental Health, 2<sup>nd</sup> ed, Jones and Bartlett, 2012.
- Haynes, R.B., et al: Clinical Epidemiology: How to Do Clinical Practice Research, 3<sup>rd</sup> Ed., Lippincott Williams & Wilkins, 2005.
- Novick L.F., et al: Public Health Administration: Principles for Population-Based Management, 2<sup>nd</sup> Ed, Jones & Bartlett, 2007.
- Rothman, K.J., et al: Modern Epidemiology, 3<sup>rd</sup> ed, Lippincott Williams & Wilkins, 2008.
- Scutchfield F.D., Keck C.W.: Principles of Public Health Practice, 3<sup>rd</sup> ed, Delmar, 2009.

### WEBSITES

- Guide to Community Preventive Services  
<http://thecommunityguide.org>
- Healthy People 2020  
<http://www.healthypeople.gov>

*\*In addition to the reference material listed above, all reference materials (books, periodicals, and study questions) listed for the Core on page 4 are applicable.*

## PERCENTAGE DISTRIBUTION OF TEST ITEMS

- I. HEALTH SERVICES ADMINISTRATION (30%)
- II. ENVIRONMENTAL HEALTH (15%)
- III. BIOSTATISTICS (10%)
- IV. EPIDEMIOLOGY (15%)
- V. CLINICAL PREVENTIVE MEDICINE (30%)

## SPECIALTY OUTLINE

### I. HEALTH SERVICES ADMINISTRATION AND SYSTEMS-BASED PRACTICE

- A. Organization
  - 1. Public sector
  - 2. Private sector
- B. Financing and delivery
  - 1. Public sector
  - 2. Private sector
  - 3. Financing mechanisms
- C. Public health practice
  - 1. Concepts, definitions and practice areas
  - 2. Legal and ethical issues
  - 3. Public health practice tools
- D. Systems-based practice
  - 1. Medical errors and patient safety
  - 2. Quality measurement, assurance and improvement
  - 3. Patient satisfaction and functional status
  - 4. Demand and disease management strategies and programs

### II. ENVIRONMENTAL HEALTH

- A. Global issues
  - 1. Climate change
  - 2. Threat of nuclear warfare
  - 3. Biological warfare and bioterrorism
  - 4. Chemical warfare and terrorism
- B. Public health protection
  - 1. Air quality
  - 2. Water quality
  - 3. Food quality
  - 4. Physical stressors
  - 5. Solid waste management
  - 6. Hazardous materials management
  - 7. Land use and planning
  - 8. Environmental site assessment
- C. Risk assessment
  - 1. Hazard identification
  - 2. Exposure assessment
  - 3. Dose response assessment
  - 4. Risk characterization

### III. BIOSTATISTICS

- A. Describing data
  - 1. Frequencies and distributions
  - 2. Measures of central tendency
  - 3. Measures of variation
  - 4. Probability
  - 5. Standard scores
  - 6. P-values
- B. Statistics
  - 1. Statistical inference
  - 2. t test
  - 3. Analysis of variance (ANOVA)
  - 4. Simple linear regression
  - 5. Multiple regression
  - 6. Analysis of covariance
  - 7. Time series analysis
  - 8. Chi-square
  - 9. Measurement scales
  - 10. Binomial test
  - 11. Fisher exact test
  - 12. McNemar test
  - 13. Mann-Whitney test
  - 14. Median test
  - 15. Sign test
  - 16. Wilcoxon test
  - 17. Spearman Rank Correlation Coefficient
  - 18. Life table (or survival) analysis
  - 19. Logistic regression
  - 20. Multivariable analysis of variance
  - 21. Multiple correlation coefficient
  - 22. Partial correlation
- C. Hypothesis testing
- D. Meta-analysis

#### IV. EPIDEMIOLOGY

- A. Data sources
  - 1. Vital records
  - 2. Reportable diseases
  - 3. Surveys
  - 4. Registries
  - 5. Morbidity
  - 6. Census
  - 7. National health surveys
- B. Study design
  - 1. Experimental studies
  - 2. Quasi-experimental studies
  - 3. Observational studies
- C. Measurements of morbidity and mortality
  - 1. Rates, ratios and proportions
  - 2. Life expectancy
  - 3. Population pyramids
  - 4. Measures of disability
- D. Measures of effect
  - 1. Attributable risk (risk difference)
  - 2. Relative risk
  - 3. Odds ratio
- E. Epidemiologic associations and data interpretation
  - 1. Causality
  - 2. Bias (systematic error)
  - 3. Generalizability
- F. Epidemiology of infectious diseases
  - 1. Agents
  - 2. Characteristics of infectious agents
  - 3. Host characteristics
  - 4. Environment characteristics
  - 5. Modes of transmission
  - 6. Measures of disease outbreaks
  - 7. Outbreak investigation and intervention
  - 8. Evaluation of intervention
- G. Legal and ethical aspects of epidemiologic studies
  - 1. Human subjects review
  - 2. Screening
  - 3. Conflicts of interest
  - 4. Community involvement
  - 5. Archived samples

#### V. CLINICAL PREVENTIVE MEDICINE

- A. Primary prevention
  - 1. Personal health behaviors
  - 2. Infectious diseases
  - 3. Chemoprophylaxis
- B. Secondary prevention
  - 1. Principles of screening
  - 2. Cardiovascular disease
  - 3. Cancer
  - 4. Infectious diseases
  - 5. Metabolic disorders
  - 6. Hematologic disorders
  - 7. Respiratory disorders
  - 8. Ophthalmologic and otologic disorders
  - 9. Mental disorders
  - 10. Musculoskeletal disorders

#### 11. Prenatal screening

- 12. Pediatric health supervision/anticipatory guidance
- 13. Genetic screening
- C. Tertiary prevention and disease management
  - 1. Antibiotic resistant organisms
  - 2. Organ transplantation