Examinations:
Core
Aerospace Medicine
Occupational Medicine
Public Health and
General Preventive Medicine

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Introduction to The Guide

This Guide has been prepared for physicians who seek to develop knowledge and skills in Preventive Medicine through appropriate reading, class work, formal training, and experience. The Guide describes the scope and content of the field, including the specialty areas, so that physicians may know what is expected of them as they engage in comprehensive specialty practice or prepare for examination by the American Board of Preventive Medicine (ABPM). In addition, a list of competencies has been developed for Preventive Medicine practitioners. Review of the competencies and the accompanying performance indicators will assist in targeting content areas for study or review.

A companion document prepared by the ABPM, entitled Answers to Your Most Asked Questions, provides additional information on the examination.

The Guide includes outlines of core and specialty area content; approximate percentage distributions of test items; lists of books, periodicals, and other materials which have been found to be useful to practitioners and examinees; and general information about Board examinations. The outlines and lists are not claimed to be all-inclusive or definitive. In every specialty, time and circumstances bring changes in what is expected of its practitioners. Books grow out of date and are replaced by later editions or alternative works by different authors. Thus, although the Guide is revised from time to time, the Board makes no claim that cited texts are best or most current and cannot assure that persons who read any or all listed texts will achieve competence or perform at some predictable level on the examination. Further, it is well recognized that personal backgrounds and preferences are important determinants of the suitability of any particular text or educational medium.

Examinations conducted by the ABPM are intended to confirm the determination by the Board that the candidate is qualified by training and experience to claim competence in the respective specialty area. Accordingly, the examinations cover both Preventive Medicine core and the more focused content of specialty practice. The former emphasizes the approach of the physician to the prevention and control of disease in populations and the promotion of health. Fundamental are biostatistical and epidemiologic skills; an understanding of the organizational and administrative factors related to regulations, multi-disciplinary agencies, and the legal system; and basic comprehensive Preventive Medicine knowledge, including basic Aerospace Medicine, Occupational Medicine, and Public Health and General Preventive Medicine.

The specialty area examinations are intended to assess whether the candidate claiming to have the knowledge, skills, and experience associated with comprehensive specialty practice is qualified to do so. The Board recognizes that many applicants are engaged in practice or have received training which is not fully congruent with Board expectations. However, the Board cannot adjust its definition of specialty practice to conform to the day-to-day work experience of a varied group of applicants. Applicants who judge their training and experience to lack elements regarded by the Board as important will find it helpful to prepare for comprehensive specialty practice, and examination, by guided study. This Study Guide outlines the scope of practice and provides a list of useful texts and periodicals. There is no certainty that the answer to every examination question will be found in the cited materials, as many questions require an exercise of discernment and judgment rather than a specific textbook answer.

Candidates commonly inquire if review books, courses, or similar exam preparation offerings are of value. Many examinees feel that brief courses enhance recall of previously acquired knowledge and improve one’s approach to multiple-choice examinations in general. But it is quite unlikely that anyone will learn, for example, biostatistics or toxicology, in a review course or from a review CD or other media. Board and exam committee members do not participate as faculty in such activities nor are such practice questions abstracted from Board examinations and vice versa. Some review questions may be similar to examination questions; however it is not correct to infer that there is a transfer of content as a small change in a question or in a response may change what is the correct answer.

There are no trick questions, and it would be unusual for a question to reflect very recent events or issues (i.e., new “hot” topics) because of the lead time necessary to develop the full examination. The general purpose is to ascertain whether there is a sound base of specialty-relevant knowledge and skills and the ability to exercise discernment and judgment.

There are 150 questions on the core and 150 questions on the specialty area examinations. All questions are weighted equally. Candidates will find it of advantage to answer all questions, and there is no penalty for an incorrect answer, i.e., wrong answers are not subtracted from right answers and there is no advantage in leaving a question unanswered. Thus, the candidate who has no idea as to the correct answer and responds at random will have a 25% chance of selecting it since there are four choices for each question. In most cases, even when the correct answer is not known with confidence, the candidate will have sufficient knowledge to exclude 2 or 3 of the choices as improbable. Guessing on the remaining possibilities offers better odds than 25% and reflects the fact that the candidate should earn partial advantage from knowing what is not right.

Board examination questions are all multiple choice, best single answer with four possible responses. The question may contain a clinical vignette, an experimental or epidemiological observation, a definition or classification, an administrative problem, an application of a principle or regulation, or any situation which might be faced by a specialist in practice.

(1) Lane D.S., Ross V., Parkinson M.D., Chen D.W.: Performance Indicators for Assessing Competencies of Preventive Medicine Residents, American Journal of Preventive Medicine, 1995; 11:1-8

1. The effectiveness of a new blood test for the detection of disease X was studied in a group of 100 patients with disease X and a group of 400 healthy persons. The following data were obtained.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Present</th>
<th>Absent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Positive</td>
<td>99</td>
<td>30</td>
<td>129</td>
</tr>
<tr>
<td>Test Negative</td>
<td>1</td>
<td>370</td>
<td>371</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>400</td>
<td>500</td>
</tr>
</tbody>
</table>

The specificity of the test is best expressed as:

A. $\frac{30}{400} \times 100\% = 7.5\%$
B. $\frac{99}{129} \times 100\% = 76.7\%$
C. $\frac{370}{400} \times 100\% = 92.5\%$
D. $\frac{99}{100} \times 100\% = 99.0\%$

2. The increased incidence of lung cancer among uranium miners is best attributed to exposure to:

A. alpha radiation
B. beta radiation
C. gamma radiation
D. neutron radiation

3. A 56-year-old woman with a family history of hypertension and coronary artery disease has recently stopped smoking cigarettes. Her blood pressure, lungs and heart are normal on examination. According to the United States Preventive Services Task Force, her physician should recommend which of the following?

A. Daily vitamin C supplement
B. Daily vitamin E supplement
C. Regular weight-bearing exercise
D. Restricted dietary salt intake

4. Which of the following disorders is responsible for the greatest loss of disability-adjusted life-years (DALYs)?

A. Cardiovascular disease
B. Depressive disorders
C. Diabetes mellitus
D. Schizophrenia

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**STUDY OUTLINES**

Four outlines follow: 1) the overall specialty of Preventive Medicine (referred to in examinations as Core); 2) Aerospace Medicine; 3) Occupational Medicine; and 4) Public Health and General Preventive Medicine. Each outline is intended to describe the scope of the field; the scope of the respective examination is essentially congruent. However the statement of scope does not reflect the appropriate weighting of any given item as determined by importance or frequency in practice. Thus, items of fundamental importance and those with less frequent application or more peripheral concern appear in outline to be equivalent.

The distribution of examination questions is weighted in favor of relevance to actual practice; however candidates who are preparing to represent themselves as medical specialists must recognize that they are responsible for knowledge and skills across the breadth of their chosen specialty field, not only in the preponderant content of their day-to-day practice. Examinations do not stress esoterica, and they do require that examinees demonstrate sound understanding of the entire specialty. A primary purpose of these outlines is to describe the extent of the specialty fields.

An additional statement about the Core is appropriate. The Core examination is intended to cover material which is expected to be understood by all specialists in Preventive Medicine. All diplomates of the Board are expected to share a common or core competence in biostatistics, epidemiology, occupational and environmental health, clinical preventive medicine, and administration. The Core questions assess the candidate’s grasp of fundamentals required of all physicians in Preventive Medicine.


## Preventive Medicine Core

### Books


### Websites

[http://www.ahrq.gov](http://www.ahrq.gov)

### Periodicals (Previous Five Years)

American Journal of Preventive Medicine.  
Journal of the American Medical Association.  

### Study Questions


### Percentage Distribution of Test Items

I. Health Services Management (Systems-Based Practice) 15%

II. Epidemiology and Biostatistics 35%

III. Clinical Preventive Medicine 20%

IV. Behavior and Mental Health 12%

V. Environmental 18%

## Core Outline

### I. Health Services Management (Systems-Based Practice)

A. Organization  
1. Government  
2. Service Delivery  

B. Health Care Delivery  
1. Models  
2. Medical Management  
3. Business Management  
4. Utilization Management  

C. Finance and Economics  
1. Health Care Economics  
2. Services Payment and Financing  
3. Financial Management  

D. Organizational Structure and Development  
1. Bureaucracy Characteristics  
2. Strategic Planning and Policy Development  
3. Program Assessment and Evaluation  
4. Quality and Patient Safety  
5. Organizational Development/Effectiveness  

E. Legal and Ethical Issues  
1. Ethics  
2. Legislation and Regulatory Compliance  

### II. Epidemiology and Biostatistics

A. Design and Methods  
1. Data Sources and Coding  
2. Study Design  
3. Biases and Control Measures  
4. Confounding  

B. Interpretation  
1. Measures of Central Tendency  
2. Tests of Significance  
3. Probablility  
4. Hypothesis Testing  
5. Type I error  
6. Type II error  
7. Confidence intervals  
8. Power  
9. Sample Size  
10. Multivariate analysis  
11. Correlation  
12. Multiple regression  
13. Survival Analysis  
14. Meta-Analysis  
15. Number Needed to Treat  
16. Causation and Association  
17. Measurement of Effect  

C. Vital Statistics and Demography  
1. Rates and Measures  
2. Trends  

D. Prevention and Control  
1. Disease Surveillance-Active and Passive  
2. Screening Tests  
3. Outbreak Investigation and Intervention
III. **CLINICAL PREVENTIVE MEDICINE**

A. **Cardiovascular Diseases**
   1. Coronary Artery Disease
   2. Cerebrovascular Disease
   3. Hypertension
   4. Hyperlipidemia

B. **Respiratory Diseases**
   1. Asthma
   2. COPD
   3. Other

C. **Neoplastic Diseases**
   1. Bladder Cancer
   2. Breast Cancer
   3. Cervical Cancer
   4. Gastrointestinal Cancers
   5. Hematological Malignancies
   6. Lung Cancer
   7. Oral Cancer
   8. Ovarian Cancer
   9. Prostate Cancer
   10. Skin Cancer
   11. Testicular Cancer
   12. Thyroid Cancer

D. **Infectious Diseases**
   1. Bacterial
   2. Viral
   3. Parasitic
   4. Fungal
   5. Spirochete
   6. Atypical
   7. Food-borne Illnesses
   8. Sexually Transmitted
   9. Immunizations
   10. Emerging Infections

E. **Metabolic Disorders and Nutrition**
   1. Diabetes Mellitus
   2. Thyroid Diseases
   3. Obesity
   4. Clinical Nutrition

F. **Musculoskeletal Disorders**
   1. Osteoporosis
   2. Back Pain & Sciatica
   3. Arthritis

G. **Neurological Disorders**

H. **Oral Health, Vision and Hearing Disorders**
   1. Oral Health
   2. Visual Disorders
   3. Hearing Impairment

I. **Maternal & Child Health**

J. **Genetics**

K. **Complementary and Alternative Care**

IV. **BEHAVIOR AND MENTAL HEALTH**

A. **Mental/Behavioral Disorders**
   1. Epidemiology
   2. Prevention/Intervention
   3. Risk Factors

B. **Substance Abuse**
   1. Epidemiology
   2. Risk Factors
   3. Screening
   4. Prevention/Intervention

C. **Health Promotion and Health Screening**
   1. Health Education Theories and Models
   2. Individual
   3. Population

V. **ENVIRONMENTAL**

A. **Agents**
   1. Chemical
   2. Physical
   3. Biological

B. **Community health**
   1. Air quality
   2. Water quality
   3. Climate
   4. Food safety
   5. Sanitation
   6. Hazardous materials management
   7. Radiation
   8. Heat/cold
   9. Noise
   10. Injury

C. **Occupational medicine**

D. **Aerospace medicine**

E. **Travel**

F. **Risk Assessment**

G. **Risk Management**

H. **Risk Communication**

I. **Disaster planning and management**
   1. Natural
   2. Manmade/Bioterrorism
AEROSPACE MEDICINE

BOOKS

WEBSITES
Aerospace Medical Association Medical Guidelines for Airline Travel
Aerospace Medicine Practice Guidelines (completed guidelines only)
http://www.asams.org/guidelines.htm
Guide for Aviation Medical Examiners
http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/aam/ame/guide/

PERIODICALS (PREVIOUS FIVE YEARS)
Aviation, Space and Environmental Medicine.

PERCENTAGE DISTRIBUTION OF TEST ITEMS
I. The Flight Environment (40%)
II. Clinical Aerospace Medicine (30%)
III. Operational Aerospace Medicine (20%)
IV. Management and Administration (10%)

SPECIALTY OUTLINE
I. THE FLIGHT ENVIRONMENT
A. The Biosphere
B. Theory of flight
1. Aviation - fixed and rotary wing
2. Spaceflight
C. Physiology
1. Respiratory
2. Cardiovascular
3. Spatial orientation
4. Bioacoustics
5. Visual
D. Gravitational effects
1. High performance
2. Microgravity
E. Pressure effects
1. Hypobaric
2. Hyperbaric
F. Other physical effects
1. Shock and vibration
2. Thermal
3. Radiation
4. Toxicology
G. Human factors
1. Human-machine interface
2. Human performance
H. Aerospace systems
1. Vehicles
2. Ground support
3. Simulators
4. Remotely Piloted Vehicles
5. Escape mechanisms
6. Medical systems

II. CLINICAL AEROSPACE MEDICINE
A. Fitness for duty and return to work
1. Cardiology
2. Pulmonary
3. Ophthalmology
4. Otolaryngology
5. Psychology and psychiatry
6. Neurology
7. Other medical and surgical conditions
B. Health maintenance
1. Wellness
2. Self-imposed stress

III. Operational Aerospace Medicine
A. Air and space operations
1. Military
2. Civil aviation
3. Space
B. Selection and retention
1. Medical standards
2. Aeromedical evaluations
3. Longitudinal surveillance
C. Aeromedical transportation
D. Survival, search and rescue
1. Crash worthiness
2. Search and rescue systems
3. Airport disaster management
E. Mishap investigation
1. Site activities
2. Forensic considerations
3. Accident rate and data
F. Travel medicine

IV. MANAGEMENT AND ADMINISTRATION
A. Regulations
1. Military
2. Civil
3. International
B. Organizations
1. ICAO
2. WHO
3. DOT/FAA
4. NASA
5. NTSB
**OCCUPATIONAL MEDICINE**

**BOOKS**

**WEBSITES**
Federal Motor Carrier Safety Administration  
http://www.fmcsa.dot.gov
Office of Drug and Alcohol Policy and Compliance  
http://www.dot.gov/ost/dapc/
Occupational Safety and Health Administration  
http://www.osha.gov
National Institute of Occupational Safety and Health  
http://www.cdc.gov/niosh

**PERIODICALS (PREVIOUS FIVE YEARS)**
American Journal of Industrial Medicine
American Journal of Health Promotion
Journal of Occupational and Environmental Medicine
Occupational and Environmental Medicine
Occupational Medicine

**PERCENTAGE DISTRIBUTION OF TEST ITEMS**

I. Disability Management and Work Fitness (10%)
II. Workplace Health and Surveillance (10%)
III. Hazard Recognition, Evaluation and Control (10%)
IV. Clinical (35%)
V. Occupational Health Program Management (10%)
VI. Environmental Health and Risk Assessment (10%)
VII. Toxicology (15%)

**SPECIALTY OUTLINE**

I. DISABILITY MANAGEMENT AND WORK FITNESS
   A. Disability prevention and management
      1. Early identification
      2. Risk factors
      3. Effects on illness or injury
      4. Accommodations
      5. Prevention plans for recovered employees
   B. Americans with Disabilities Act
      1. Undue risk
      2. “Direct threat”
      3. Accommodations
      4. Pre-placement examinations
   C. Fitness for duty and return to work
      1. Functional work capacity
      2. Impairment and rating
      3. Department of Transportation exams
      4. Federal Aviation Administration exams
      5. Special considerations

II. WORKPLACE HEALTH AND SURVEILLANCE
   A. Injury and illness risk factors
      1. Occupational
      2. Non-occupational
      3. Injury and illness data analysis
   B. Medical surveillance programs
      1. Program components
      2. Biomarkers and tests
      3. Interventions
      4. Effectiveness
   C. Sentinel health events
   D. Cluster analysis
   E. Interventions
      1. Individual
      2. Population
      3. Workplace
      4. Effectiveness

III. HAZARD RECOGNITION, EVALUATION AND CONTROL
   A. Types
      1. Physical
      2. Chemical
      3. Biological
   B. Hazard Characterization
      1. Walk through assessment
      2. Industrial hygiene surveys
   C. Interpretation of existing standards
      1. OSHA Safety Standards
      2. OSHA PEL
      3. ACGIH TLVs and BEIs
      4. EPA regulations
   D. Ergonomics
      1. Evaluations
      2. Specific hazards
      3. Interventions and controls
   E. Chronobiology
      1. Shift work
      2. Travel
   F. Physical hazards
      1. Mechanical and electrical hazards
      2. Vibration
      3. Ionizing radiation
      4. Non-ionizing radiation
      5. Lasers
      6. Noise
      7. High and low pressure
      8. High and low temperature
G. Hazard communication
   1. Material safety data sheets (MSDS's)

H. Industrial hygiene controls
   1. General program design
   2. Engineering controls
   3. Personal protective equipment
   4. Administrative controls

I. Medical programs
   1. Hearing conservation
   2. Respirator clearance

IV. CLINICAL

A. General
   1. Occupational history
   2. Exposure history
   3. General laboratory studies
   4. Work relatedness of symptoms
   5. Contributing non-occupational/environmental factors

B. Cardiology
   1. Effects of chemical agents
   2. Effects of physical agents
   3. Fitness for duty relating to cardiac disease

C. Dermatology
   1. Risk factors
   2. Patch tests
   3. Allergic contact dermatitis
   4. Irritant-induced dermatitis
   5. Actinic skin damage
   6. Photosensitization
   7. Occupational acne
   8. Work aggravated dermatoses
   9. Occupational cutaneous infections
   10. Cutaneous neoplasms
   11. Pigmentary disorders
   12. Chemical burns
   13. Bullae and callouses
   14. Folliculitis barbae
   15. Latex allergy

D. Ear, Nose and Throat
   1. Occupational hearing loss
   2. Audiograms
   3. Barotrauma

E. Hematology/Oncology
   1. Laboratory Studies
   2. Anemia
   3. Neoplasms
   4. Hemolysis
   5. Methemoglobin producers

F. Infectious Diseases and Biohazards
   1. Blood borne pathogens
   2. Diseases of healthcare workers
   3. Diseases of travelers
   4. Diseases of outdoor workers
   5. Zoonotic conditions
   6. Emerging infectious diseases
   7. Building related infectious diseases
   8. Biological warfare agents

G. Musculoskeletal
   1. Spine and back
   2. Joints and extremities
   3. Chronic musculoskeletal pain syndromes

H. Neurology
   1. Diagnostic tests
   2. Chemical agents
   3. Entrapment neuropathies
   4. Radiculopathies

I. Ophthalmology
   1. Visual screening
   2. Conjunctivitis
   3. Ultraviolet photokeratitis
   4. Foreign bodies
   5. Chemical exposures and burns

J. Psychiatry
   1. Psychiatric diseases
   2. Substance abuse
   3. Violent, homicidal or suicidal employee
   4. Employee assistance programs

K. Pulmonary
   1. Diagnostic tests
   2. Respirator certification examination
   3. Occupational asthma and bronchoreactivity
   4. Pneumoconiosis
   5. Irritant inhalations
   6. Hypersensitivity pneumonitis
   7. Beryllium-related disease
   8. Hard metal disease

L. Reproductive medicine
   1. Teratology
   2. Fetotoxicity
   3. Impaired gametogenesis
   4. Reproductive health policy
   5. Agents causing adverse reproductive outcomes

V. OCCUPATIONAL HEALTH PROGRAM MANAGEMENT

A. Medical ethics and confidentiality

B. Regulations
   1. OSHA
   2. DOT
   3. FAA
   4. EPA
   5. Family Medical Leave Act (FMLA)

C. Workers' compensation

D. Health promotion

E. Early intervention
   1. Health risk assessment
   2. Screening
   3. Disease management

F. Health care delivery systems

G. Medical quality management

H. Emergency planning
   1. Hazard materials
   2. Disasters
   3. Biological warfare
   4. Chemical warfare
   5. Nuclear warfare
VI. ENVIRONMENTAL HEALTH AND RISK ASSESSMENT

A. Risk assessment
B. Community “Right to Know”
   1. Community advisory panel
C. Environmental monitoring
D. Human health effects
   1. Pulmonary
   2. Reproductive
   3. Neoplastic
E. Environmental exposures
   1. Releases of industrial chemicals
   2. Human and animal wastes
   3. Outdoor air pollution
   4. Indoor air pollution
   5. Water pollution
   6. Hazardous wastes
   7. Radon
   8. Household chemicals
   9. Global climate changes
   10. Pesticides

VII. TOXICOLOGY

A. Toxicokinetics
   1. Absorption
   2. Metabolism
   3. Storage
   4. Excretion
   5. Measurement units
B. Carcinogenesis
   1. Bioassays
   2. Mechanisms
   3. Modulating factors
C. Hydrocarbons and Halohydrocarbons
   1. Aliphatics and Alicyclics
   2. Aldehydes
   3. Alcohols
   4. Aromatics
   5. Ketones
   6. Acetates
   7. Peroxides
   8. Ethers
D. Metals and metalloids
E. Gases
   1. Combustion products
   2. Irritant gases
   3. Metal hydrides
   4. Chemical asphyxiants
   5. Simple asphyxiants
   6. Chlorofluorocarbons
F. Dusts
   1. Inorganic
   2. Organic
G. Pesticides
   1. Fungicides
   2. Herbicides
   3. Insecticides
   4. Repellents
   5. Fumigants
H. Epoxy resins and polymer systems
I. Glycol ethers
J. Nitrogen compounds
   1. Amides
   2. Amines
   3. Nitriles
   4. Nitro compounds
K. Chemical warfare agents
L. Flourine, Flouride, and HF
**Public Health and General Preventive Medicine**

**Books**

**Websites**
- Guide to Community Preventive Services [http://thecommunityguide.org](http://thecommunityguide.org)

*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