



CMA (AAMA)

Certification/Recertification Examination Content Outline

I. General

A. Psychology

1. Understanding Human Behavior

- a. Behavioral theories
 - (1) Maslow
 - (2) Erikson
- b. Defense mechanisms
 - (1) Common types
 - (2) Recognition and management

2. Human Growth and Development

- a. Normal developmental patterns/milestones

3. Death and Dying Stages

B. Communication

1. Therapeutic/Adaptive Responses to Diverse Populations

- a. Visually impaired
- b. Hearing impaired
- c. Age specific
 - (1) Geriatric
 - (2) Pediatric/adolescent
- d. Seriously/terminally ill
- e. Intellectual disability
- f. Illiterate
- g. Non-English speaking
- h. Anxious/angry/distraught
- i. Socially/culturally/ethnically diverse

2. Nonverbal Communication

- a. Body language
 - (1) Posture
 - (2) Position
 - (3) Facial expression
 - (4) Territoriality/physical boundaries
 - (5) Gestures
 - (6) Touch

- (7) Mannerisms
- (8) Eye contact

3. Communication Cycle

- a. Sender-message-receiver-feedback
- b. Listening skills
 - (1) Active/therapeutic
- c. Assess level of understanding
 - (1) Reflection
 - (2) Restatement
 - (3) Clarification
 - (4) Feedback
- d. Barriers to communication
 - (1) Internal distractions
 - (a) Pain
 - (b) Hunger
 - (c) Anger
 - (2) External/environmental distractions
 - (a) Temperature
 - (b) Noise

4. Collection of Data

- a. Types of questions
 - (1) Exploratory
 - (2) Open-ended
 - (3) Closed/Direct

5. Telephone Techniques

- a. Call management
 - (1) Screening/gathering data
 - (2) Emergency/urgent situations
- b. Messages
 - (1) Taking messages
 - (2) Leaving messages

6. Interpersonal Skills

- a. Displaying impartial conduct without regard to race, religion, age, gender, sexual orientation, socioeconomic status, physical challenges, special needs, lifestyle choices
- b. Recognizing stereotypes and biases

- c. Demonstrating empathy/sympathy/compassion

C. Professionalism

1. Professional Behavior

- a. Professional situations
 - (1) Displaying tact, diplomacy, courtesy, respect, dignity
 - (2) Demonstrating responsibility, integrity/honesty
 - (3) Responding to criticism
- b. Professional image

2. Performing as a Team Member

- a. Principles of health care team dynamics
 - (1) Cooperation for optimal outcomes
 - (2) Identification of the roles and credentials of health care team members
- b. Time management principles
 - (1) Prioritizing responsibilities

D. Medical Law/Regulatory Guidelines

1. Advance Directives

- a. Living will
- b. Medical durable power of attorney
- c. Patient Self-Determination Act (PSDA)

2. Uniform Anatomical Gift Act

3. Occupational Safety and Health Administration (OSHA)

4. Food and Drug Administration (FDA)

5. Clinical Laboratory Improvement Act (CLIA '88)

6. Americans with Disabilities Act Amendments Act (ADAAA)

7. Health Insurance Portability and Accountability Act (HIPAA)

- a. Health insurance portability access and renewal without preexisting conditions
- b. Coordination of care to prevent duplication of services

8. Health Information Technology for Economic and Clinical Health (HITECH) Act

- a. Patient's right to inspect, amend and restrict access to his/her medical record

9. Drug Enforcement Agency (DEA)

- a. Controlled Substances Act of 1970

10. Medical Assistant Scope of Practice

- a. Consequences of failing to operate within scope

11. Genetic Information Nondiscrimination Act of 2008 (GINA)

12. Centers for Disease Control and Prevention (CDC)

13. Consumer Protection Acts

- a. Fair Debt Collection Practices Act
- b. Truth in Lending Act of 1968 (Regulation Z)

14. Public Health and Welfare Disclosure

- a. Public health statutes
 - (1) Communicable diseases
 - (2) Vital statistics
 - (3) Abuse/neglect/exploitation against child/elder
 - (a) Domestic abuse
 - (4) Wounds of violence

15. Confidentiality

- a. Electronic access audit/activity log
- b. Use and disclosure of personal/protected health information (PHI)
 - (1) Consent/authorization to release
 - (2) Drug and alcohol treatment records
 - (3) HIV-related information
 - (4) Mental health

16. Health Care Rights and Responsibilities

- a. Patients' Bill of Rights/Patient Care Partnership
- b. Professional liability
 - (1) Current standard of care
 - (2) Standards of conduct
 - (3) Malpractice coverage
- c. Consent to treat
 - (1) Informed consent
 - (2) Implied consent
 - (3) Expressed consent
 - (4) Patient incompetence
 - (5) Emancipated minor
 - (6) Mature minor

17. Medicolegal Terms and Doctrines

- a. Subpoena duces tecum
- b. Subpoena
- c. Respondeat superior
- d. Res ipsa loquitur
- e. Locum tenens
- f. Defendant-plaintiff
- g. Deposition
- h. Arbitration-mediation
- i. Good Samaritan laws

18. Categories of Law

- a. Criminal law
 - (1) Felony/misdemeanor
- b. Civil law
 - (1) Contracts (physician-patient relationships)
 - (a) Legal obligations to the patient
 - (b) Consequences for patient noncompliance
 - (c) Termination of medical care
 - (i) Elements/behaviors for withdrawal of care
 - (ii) Patient notification and documentation
 - (d) Ownership of medical records
 - (2) Torts
 - (a) Invasion of privacy
 - (b) Negligence
 - (c) Intentional torts
 - (i) Battery
 - (ii) Assault
 - (iii) Slander
 - (iv) Libel
- c. Statutory law
 - (1) Medical practice acts
- d. Common law (Legal precedents)

E. Medical Ethics

1. Ethical Standards

2. Factors Affecting Ethical Decisions

- a. Legal
- b. Moral

F. Risk Management, Quality Assurance, and Safety

1. Workplace Accident Prevention

- a. Slips/trips/falls

2. Safety Signs, Symbols, Labels

3. Environmental Safety

- a. Ergonomics
- b. Electrical safety
- c. Fire prevention/extinguisher use/regulations

4. Compliance Reporting

- a. Reporting unsafe activities and behaviors
- b. Disclosing errors in patient care
- c. Insurance fraud, waste, and abuse
- d. Conflicts of interest
- e. Incident reports

G. Medical Terminology

1. Word Parts

- a. Basic structure
 - (1) Roots/combining forms
 - (2) Prefixes
 - (3) Suffixes

2. Definitions/Medical Terminology

- a. Diseases and pathologies
- b. Diagnostic procedures
- c. Surgical procedures
- d. Medical specialties

II. Administrative

H. Medical Reception

1. Medical Record Preparation

2. Demographic Data Review

- a. Identity theft prevention
- b. Insurance eligibility verification

3. **Handling Vendors/Business Associates**
4. **Reception Room Environment**
 - a. Comfort
 - b. Safety
 - c. Sanitation
5. **Practice Information Packet**
 - a. Office policies
 - b. Patient financial responsibilities

I. Patient Navigator/ Advocate

1. **Resource Information**
 - a. Provide information about community resources
 - b. Facilitate referrals to community resources
 - c. Referral follow-up

J. Medical Business Practices

1. **Written Communication**
 - a. Letters
 - b. Memos/interoffice communications
 - c. Reports
2. **Business Equipment**
 - a. Routine maintenance
 - b. Safety precautions
3. **Office Supply Inventory**
 - a. Inventory control/recordkeeping
4. **Electronic Applications**
 - a. Medical management systems
 - (1) Database reports
 - (2) Meaningful use regulations
 - b. Spreadsheets, graphs
 - c. Electronic mail
 - d. Security
 - (1) Password/screen saver
 - (2) Encryption
 - (3) Firewall
 - e. Transmission of information
 - (1) Facsimile/scanner
 - (2) Patient portal to health data
 - f. Social media

K. Establish Patient Medical Record

1. **Recognize and Interpret Data**
 - a. History and physical
 - b. Discharge summary
 - c. Operative note
 - d. Diagnostic test/lab report
 - e. Clinic progress note
 - f. Consultation report
 - g. Correspondence
 - h. Charts, graphs, tables
 - i. Flow sheet
2. **Charting Systems**
 - a. Problem-oriented medical record (POMR)
 - b. Source-oriented medical record (SOMR)

L. Scheduling Appointments

1. **Scheduling Guidelines**
 - a. Appointment matrix
 - b. New patient appointments
 - (1) Identify required information
 - c. Established patient appointments
 - (1) Routine
 - (2) Urgent/emergency
 - d. Patient flow
 - (1) Patient needs/preference
 - (2) Physician preference
 - (3) Facility/equipment requirements
 - e. Outside services (e.g., lab, X-ray, surgery, outpatient procedures, hospital admissions)
2. **Appointment Protocols**
 - a. Legal aspects
 - b. Physician referrals
 - c. Cancellations/no-shows
 - d. Physician delay/unavailability
 - e. Reminders/recall systems
 - (1) Appointment cards
 - (2) Phone calls/text messages/e-mail notifications
 - (3) Tickler file

M. Practice Finances

1. **Financial Terminology**
 - a. Accounts receivable
 - b. Accounts payable

- c. Assets
- d. Liabilities
- e. Aging of accounts
- f. Debits
- g. Credits
- h. Diagnosis Related Groups (DRGs)
- i. Relative Value Units (RVUs)

2. Financial Procedures

- a. Payment receipts
 - (1) Co-pays
- b. Data entry
 - (1) Post charges
 - (2) Post payments
 - (3) Post adjustments
- c. Manage petty cash account
- d. Financial calculations
- e. Billing procedures
 - (1) Itemized statements
 - (2) Billing cycles
- f. Collection procedures
 - (1) Aging of accounts
 - (2) Preplanned payment options
 - (3) Credit arrangements
 - (4) Use of collection agencies

3. Diagnostic and Procedural Coding Applications

- a. Current Procedural Terminology (CPT)
 - (1) Modifiers
 - (2) Upcoding
 - (3) Bundling of charges
- b. International Classification of Diseases, Clinical Modifications (ICD-CM) (*Current schedule*)
- c. Linking procedure and diagnosis codes
- d. Healthcare Common Procedure Coding System (HCPCS Level II)

4. Third-Party Payers/Insurance

- a. Types of plans
 - (1) Commercial plans
 - (2) Government plans
 - (a) Medicare
 - (i) Advance Beneficiary Notice (ABN)
 - (b) Medicaid
 - (c) TRICARE/CHAMPVA
 - (3) Managed care organizations (MCOs)
 - (a) Managed care requirements
 - (i) Care referrals

- (ii) Precertification
 - [a] Diagnostic and surgical procedures
 - (iii) Prior authorization
 - [a] Medications
 - (4) Workers' compensation
- b. Insurance claims
- (1) Submission
 - (2) Appeals/denials
 - (3) Explanation of benefits (EOB)

III. Clinical

N. Anatomy and Physiology

1. **Body as a Whole**
 - a. Structural units
 - b. Anatomical divisions, body cavities
 - c. Anatomical positions and directions
 - d. Body planes, quadrants
2. **Body Systems Including Normal Structure, Function, and Interrelationships Across the Life Span**
 - a. Integumentary
 - b. Musculoskeletal
 - c. Nervous
 - d. Cardiovascular, hematopoietic, and lymphatic
 - e. Respiratory
 - f. Digestive
 - g. Urinary
 - h. Reproductive
 - i. Endocrine
 - j. Sensory
3. **Pathophysiology and Diseases of Body Systems**
 - a. Integumentary
 - b. Musculoskeletal
 - c. Nervous
 - d. Cardiovascular, hematopoietic, and lymphatic
 - e. Respiratory
 - f. Digestive
 - g. Urinary
 - h. Reproductive
 - i. Endocrine
 - j. Sensory

O. Infection Control

1. **Infectious Agents**
 - a. Bacteria
 - b. Viruses
 - c. Protozoa
 - d. Fungi
 - e. Parasites
2. **Modes of Transmission**
 - a. Direct
 - b. Indirect
 - c. Airborne
 - d. Droplet
 - e. Inhalation
3. **Infection Cycle/Chain of Infection**
4. **Body's Natural Barriers**
5. **Medical Asepsis**
 - a. Hand hygiene
 - (1) Hand washing
 - (2) Alcohol-based hand rub
 - b. Sanitization
 - c. Disinfection
6. **Surgical Asepsis**
 - a. Surgical scrub
 - b. Sterilization techniques/ Autoclave
 - (1) Preparing items
 - (2) Wrapping
 - (3) Sterilization indicators
7. **Standard Precautions/Blood-Borne Pathogen Standards**
 - a. Body fluids
 - b. Secretions
 - c. Excretions
 - d. Blood
 - (1) HIV-HBV-HCV
 - e. Mucous membranes
 - f. Personal protective equipment (PPE)
 - (1) Gowns
 - (2) Gloves
 - (3) Masks
 - (4) Caps
 - (5) Eye protection
 - g. Post-exposure plan
8. **Biohazard Disposal/Regulated Waste**
 - a. Sharps
 - b. Blood and body fluids

- c. Safety data sheets (SDS)
- d. Spill kit

P. Patient Intake and Documentation of Care

1. **Medical Record Documentation**
 - a. Subjective data
 - (1) Chief complaint
 - (2) Present illness
 - (3) Past medical history
 - (4) Family history
 - (5) Social and occupational history
 - (6) Review of systems
 - b. Objective data
 - c. Making corrections
 - d. Treatment/compliance

Q. Patient Preparation and Assisting the Provider

1. **Vital Signs/Anthropometrics**
 - a. Blood pressure
 - (1) Technique
 - (2) Equipment
 - (a) Stethoscope
 - (b) Sphygmomanometer
 - b. Pulse
 - (1) Technique
 - (a) Pulse points
 - (b) Rate and rhythm
 - c. Height/weight/BMI
 - (1) Technique
 - (2) Equipment
 - d. Body temperature
 - (1) Technique
 - (2) Equipment
 - e. Oxygen saturation/pulse oximetry
 - (1) Technique
 - (2) Equipment
 - f. Respiration rate
 - (1) Technique
2. **Recognize and Report Age-Specific Normal and Abnormal Vital Signs**
3. **Examinations**
 - a. Methods
 - (1) Auscultation
 - (2) Palpation
 - (3) Percussion
 - (4) Mensuration

- (5) Manipulation
- (6) Inspection
- b. Body positions/draping
 - (1) Sims
 - (2) Fowlers
 - (3) Supine
 - (4) Knee-chest
 - (5) Prone
 - (6) Lithotomy
 - (7) Dorsal recumbent
- c. Pediatric exam
 - (1) Growth chart
 - (a) Measurements
 - (i) Techniques
- d. OB-GYN exam
 - (1) Pelvic exam/PAP smear
 - (2) Prenatal/postpartum exams

4. Procedures

- a. Procedure explanation and patient instructions
- b. Supplies, equipment, and techniques
 - (1) Eye irrigation
 - (2) Ear irrigation
 - (3) Dressing change
 - (4) Suture/staple removal
 - (5) Sterile procedures
 - (a) Surgical assisting
 - (b) Surgical tray prep
 - (c) Antiseptic skin prep
 - (d) Sterile field boundaries
 - (e) Surgical instruments
 - (i) Classifications
 - (ii) Instrument use

5. Patient Education/Health Coach

- a. Health maintenance and disease prevention
 - (1) Diabetic teaching and home care
 - (a) Home blood sugar monitoring
 - (2) Instruct on use of patient mobility equipment and assistive devices
 - (3) Pre-/post-op care instructions
 - (4) Patient administered medications
 - (5) Home blood pressure monitoring and lifestyle controls
 - (6) Home anticoagulation monitoring
 - (7) Home cholesterol monitoring
- b. Alternative medicine

6. Wellness/Preventive Care

- a. Cancer screening
- b. Sexually transmitted infections
- c. Hygienic practices
 - (1) Hand washing

- (2) Cough etiquette
- d. Smoking risks and cessation
- e. Recognition of substance abuse
- f. Osteoporosis screening/bone density scan
- g. Domestic violence screening and detection

R. Nutrition

1. Basic Principles

- a. Food nutrients
 - (1) Carbohydrates
 - (2) Fats
 - (3) Proteins
 - (4) Minerals/electrolytes
 - (5) Vitamins
 - (6) Fiber
 - (7) Water
- b. Dietary supplements

2. Special Dietary Needs

- a. Weight control
- b. Diabetes
- c. Cardiovascular disease
- d. Hypertension
- e. Cancer
- f. Lactose sensitivity/intolerance
- g. Gluten free
- h. Food allergies

3. Eating Disorders

S. Collecting and Processing Specimens

1. Methods of Collection

- a. Blood
 - (1) Venipuncture
 - (a) Site selection
 - (b) Site prep
 - (c) Equipment
 - (i) Evacuated tubes
 - (ii) Tube additives
 - (iii) Needles
 - (2) Capillary/dermal puncture
- b. Urine
 - (1) Random
 - (2) Midstream/clean catch
 - (3) Timed 24-hour collection
 - (4) Catheterization
 - (5) Pediatric urine collector
- c. Fecal specimen
- d. Sputum specimen

- e. Swabs
 - (1) Throat
 - (2) Genital
 - (3) Wound
 - (4) Nasopharyngeal

2. Prepare, Process, and Examine Specimens

- a. Proper labeling
- b. Sources of contamination
- c. Specimen preservation
 - (1) Refrigeration
 - (2) Fixative
- d. Recordkeeping
- e. Incubator
- f. Centrifuge
- g. Microscope
- h. Inoculating a culture
- i. Microbiologic slides
 - (1) Wet mount

3. Laboratory Quality Control/Quality Assurance

- a. Testing protocols
- b. Testing records and performance logs
- c. Daily equipment maintenance
- d. Calibration
- e. Daily control testing
- f. Monitor temperature controls
- g. Reagent storage
- h. CLIA-waived tests

4. Laboratory Panels and Performing Selected Tests

- a. Urinalysis
 - (1) Physical
 - (2) Chemical
 - (3) Microscopic
 - (4) Culture
- b. Hematology panel
 - (1) Hematocrit
 - (2) Hemoglobin
 - (3) Erythrocyte sedimentation rate
 - (4) Automated cell counts
 - (a) Red blood cell (RBC)
 - (b) White blood cell (WBC)
 - (c) Platelet
 - (5) Coagulation testing/INR
- c. Chemistry/metabolic testing
 - (1) Glucose
 - (2) Kidney function tests
 - (3) Liver function tests
 - (4) Lipid profile
 - (5) Hemoglobin A1c

- d. Immunology
 - (1) Mononucleosis test
 - (2) Rapid Group A Streptococcus test
 - (3) C-reactive protein (CRP)
 - (4) HCG pregnancy test
 - (5) H. pylori
 - (6) Influenza
- e. Fecal occult blood/guaiac testing

T. Diagnostic Testing

1. **Cardiovascular Tests**
 - a. Electrocardiography (EKG/ECG)
 - (1) Perform standard 12-lead
 - (2) Lead placement
 - (3) Patient prep
 - (4) Recognize artifacts
 - (5) Recognize rhythms, arrhythmias
 - (6) Rhythm strips
 - b. Holter monitors
 - c. Cardiac stress test
2. **Vision Tests**
 - a. Color
 - b. Acuity/distance
 - (1) Snellen
 - (2) E chart
 - (3) Jaeger card
 - c. Ocular pressure
 - d. Visual fields
3. **Audiometric/Hearing Tests**
 - a. Pure tone audiometry
 - b. Speech and word recognition
 - c. Tympanometry
4. **Allergy Tests**
 - a. Scratch test
 - b. Intradermal skin testing
5. **Respiratory Tests**
 - a. Pulmonary function tests (PFT)
 - b. Spirometry
 - c. Peak flow rate
 - d. Tuberculosis tests/purified protein derivative (PPD) skin tests
6. **Distinguish Between Normal/Abnormal Laboratory and Diagnostic Test Results**

U. Pharmacology

(For the 50 most commonly used medications, see the "Top 200 Drugs" at www.rxlist.com)

1. **Medications**
 - a. Classes of drugs
 - b. Drug actions/desired effects
 - c. Adverse reactions
 - d. Physicians' Desk Reference (PDR)
 - e. Storage of drugs
2. **Preparing and Administering Oral and Parenteral Medications**
 - a. Dosage
 - (1) Metric conversion
 - (2) Units of measurements
 - (3) Calculations
 - b. Routes of administration
 - (1) Intramuscular
 - (a) Z-tract
 - (2) Subcutaneous
 - (3) Oral/sublingual/buccal
 - (4) Topical
 - (5) Inhalation
 - (6) Instillation (eye-ear-nose)
 - (7) Intradermal
 - (8) Transdermal
 - (9) Vaginal
 - (10) Rectal
 - c. Injection site
 - (1) Site selection
 - (2) Needle length and gauge
 - d. Medication packaging
 - (1) Multidose vials
 - (2) Ampules
 - (3) Unit dose
 - (4) Prefilled cartridge-needle units
 - (5) Powder for reconstitution
 - e. Six Rights of Medication Administration
 - (1) Right patient, right drug, right route, right time, right dose, right documentation
3. **Prescriptions**
 - a. E-prescribing
 - b. Controlled substance guidelines
4. **Medication Recordkeeping**
 - a. Reporting/documenting errors
5. **Immunizations**

- a. Childhood
- b. Adult
- c. Recordkeeping
 - (1) Vaccine information statement (VIS)
- d. Vaccine storage

V. Emergency Management/Basic First Aid

1. **Assessment and Screening**
 - a. Treatment algorithms/flow charts
 - b. Triage algorithms/flow charts
2. **Identification and Response to Emergencies**
 - a. Bleeding/pressure points
 - b. Burns
 - c. Cardiac and respiratory arrest
 - d. Foreign body obstruction
 - e. Choking
 - f. Diabetic ketoacidosis
 - g. Insulin shock
 - h. Bone fractures
 - i. Poisoning
 - j. Seizures
 - k. Shock
 - l. Cerebral vascular accident (CVA)
 - m. Syncope
 - n. Vertigo
 - o. Wounds
 - p. Cold exposure
 - q. Heat exposure
 - r. Joint dislocations/sprains/strains
 - s. Asthmatic attack
 - t. Hyperventilation
 - u. Animal bite
 - v. Insect bite
 - w. Concussion
3. **Office Emergency Readiness**
 - a. Equipment
 - (1) Crash cart supplies
 - (2) Automated external defibrillator
 - b. Emergency response plan
 - (1) Evacuation plan



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