



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

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## 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, visit the AAMA website at [www.aama-ntl.org/cma-aama-exam/study](http://www.aama-ntl.org/cma-aama-exam/study).)*

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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