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This content
outline applies
to CMA (AAMA)[®]
Certification Exams
taken on and after
July 15, 2021.

Content Outline

For the CMA (AAMA)[®] Certification Exam

A publication of the Certifying Board of the American Association of Medical Assistants[®]



CMA (AAMA)[®]

SETS THE BAR FOR EXCELLENCE IN MEDICAL ASSISTING



The Certifying Board of the American Association of Medical Assistants has earned accreditation for Bodies Operating Certification of Persons by the International Accreditation Service. This accreditation recognizes compliance with ISO/IEC Standard 17024:2012, a global benchmark for personnel certification bodies that ensures they operate in a consistent, comparable, and reliable manner.



The Certification Program of the Certifying Board of the American Association of Medical Assistants is accredited by the National Commission for Certifying Agencies (NCCA) as a result of demonstrating compliance with the NCCA Standards for the Accreditation of Certification Programs. The NCCA is the accrediting body of the Institute for Credentialing Excellence (ICE), formerly called the National Organization for Competency Assurance (NOCA). The NCCA Standards were created to ensure that certification programs adhere to modern standards of practice for the certification industry.



Number and Percent of Questions by Category

Section	Category	Number/Percent
	Clinical Competency	
I. A.	Clinical Workflow: Patient Intake and Discharge	
I. B.	Safety and Infection Control	
I. C.	Procedures/Examinations	
I. D.	Pharmacology	
	Number of Questions	106
	Percent of Questions	59%
	General	
II. E.	Legal and Ethical Issues	
II. F.	Communication	
	Number of Questions	38
	Percent of Questions	21%
	Administrative	
III. G.	Billing, Coding, and Insurance	
III. H.	Schedule Appointments and Health Information Management	
	Number of Questions	36
	Percent of Questions	20%
	Total Number	180*
	Total Percent	100%

*The exam consists of 200 multiple-choice questions. Of these, 180 questions will be scored and 20 will be pretested.



I. Clinical Competency

A. Clinical Workflow: Patient Intake and Discharge

1. Vital Signs

- Blood pressure principles and technique
- Pulse points and techniques
 - Rate and rhythm
- Height/Weight/BMI
- Body temperature techniques and equipment
- Pulse oximetry
- Respiration rate and pattern
- Pain scale
- Pediatric measurements/
Growth chart
- Recognize/Document/Report age-specific normal and abnormal vital signs

2. Medical Terminology

- Word parts (roots, combining forms, prefixes, suffixes)
- Diagnostic procedures
- Surgical procedures

3. Interviewing Techniques

- Obtain concise and accurate reporting of relevant information
- Open-ended/Exploratory questions
- Closed/Direct questions

4. Documentation of Care

- Chief complaint
- Subjective data/Present illness
- Review of systems
- Past medical history
- Reconciliation of medications and/or allergies
- Family history

- Social and occupational history
- Objective data/Examination
- Treatment/Compliance
- Making addendums/corrections

5. Patient Screenings/Wellness Assessments

- Cancer prevention and screening
- Prevention/Screening of sexually transmitted infections
- Nicotine risks and cessation
- Recognition of substance use/
addiction
- Osteoporosis screening
- Domestic violence screening and detection
- Suicide awareness and response
- Depression screening

6. Processing Provider Orders

- Diabetic teaching
- Instructions on use of mobility equipment and assistive devices (e.g., crutches, cane, walker, wheelchair)
- Pre-/Post procedure/treatment instructions
- Patient-administered treatments and medications (e.g., self-injections, nebulizers)
- Home monitoring (e.g., blood pressure, anticoagulation, blood sugar)
- Alternative medicine/Massage/
Acupuncture
- Nutrition counseling
 - Basic nutritional elements
 - Carbohydrates
 - Fats
 - Proteins and amino acids
 - Minerals and electrolytes
 - Vitamins
 - Fiber

- Water
- Function of dietary supplements and herbs
- Special dietary needs
 - Weight control
 - Diabetes
 - Cardiovascular disease/
Hypertension
 - Cancer
 - Food sensitivity/intolerance (e.g., lactose, gluten, nut)
 - Kidney disease
- Food label interpretation
- Eating disorders

B. Safety and Infection Control

1. Infectious Agents

- Bacteria
- Viruses
- Protozoa/Parasites
- Fungi/Yeast

2. Infection Cycle/Chain of Infection

- Body's natural barriers

3. Modes of Infectious Transmission

- Direct
- Indirect

4. Standard Precautions and Exposure Control

- Occupational Safety and Health Administration (OSHA)
- Personal protective equipment
- Hand hygiene (handwashing, alcohol-based gel)
- Post-exposure protocol/Eyewash station
- Sharps/Needle safety

5. Medical Asepsis

- a. Sanitization
- b. Disinfection
- c. Cleaning (equipment, examination room, procedure area, business office, reception/scheduling areas)

6. Biohazard Disposal/Regulated Waste

- a. Blood/Body fluids/Body tissue disposal
- b. Spill kit (when and how to use)

7. Safety Resources

- a. Safety signs, symbols, labels
- b. Safety data sheets (SDS)/ Globally Harmonized System of Classification and Labeling Chemicals (GHS)

8. Safety and Emergency Procedures

- a. Workplace safety/Emergency preparedness/Evacuation
- b. Crash cart supplies/equipment
- c. Fire prevention/regulations/ extinguisher

9. Emergency Management, Identification, and Response/ Basic First Aid

- a. Bleeding control
- b. Burns
- c. Cardiac/Respiratory arrest
- d. Foreign body obstruction
- e. Diabetic ketoacidosis
- f. Insulin shock
- g. Bone fractures
- h. Poisoning
- i. Seizures
- j. Shock
- k. Cerebrovascular accident (CVA)
- l. Syncope
- m. Lacerations/Avulsions/ Punctures/Abrasions
- n. Cold/Heat exposure
- o. Joint dislocations/Sprains/Strains
- p. Asthmatic attack
- q. Hyperventilation
- r. Animal/Insect bite
- s. Head trauma
- t. Chemical exposure

10. Body Mechanics/Ergonomics

11. Risk Management, Quality Assurance, and Safety Procedures

- a. Reporting unsafe or unlawful activities and behaviors
- b. Conflicts of interest
- c. Incident reporting/Patient safety variance reporting

C. Procedures/Examinations

1. Prepare Patients for Examinations, Procedures, and Treatments

- a. Examination Methods
 - (1) Auscultation
 - (2) Inspection
 - (3) Mensuration
 - (4) Palpation
 - (5) Percussion
- b. Body positioning
 - (1) Dorsal recumbent
 - (2) Fowler's
 - (3) Knee-chest
 - (4) Lithotomy
 - (5) Prone
 - (6) Sims
 - (7) Supine

- c. Pediatric examinations
- d. Obstetric/Gynecologic examinations

2. Supplies, Equipment, Techniques, and Patient Instruction

- a. Eye irrigation
- b. Ear irrigation
- c. Suture/Staple removal
- d. Cast care/Splints/Slings

3. Surgical Assisting

- a. Surgical asepsis
- b. Surgical scrub
- c. Surgical tray prep/Sterile field boundaries
- d. Antiseptic skin prep

4. Wound Care

- a. Chronic/Non-healing
- b. Bandaging/Dressing change
- c. Post-op incision care
- d. Ostomy care

5. Instruments

- a. Classifications
- b. Identification
- c. Use
- d. Sterilization techniques/Autoclave
 - (1) Preparing items
 - (2) Wrapping items/Label/Date
 - (3) Sterilization indicators/Quality control measures

6. Anatomy and Physiology

- a. Human growth and development
- b. Normal developmental patterns/ milestones across the life-span
- c. Structural units (cell/tissue/organ)
- d. Anatomical divisions, body cavities
- e. Anatomical positions and directions
- f. Body planes and quadrants
- g. Body systems, NORMAL structure and function
 - (1) Integumentary
 - (2) Musculoskeletal
 - (3) Nervous
 - (4) Cardiovascular, hematopoietic, and lymphatic
 - (5) Respiratory
 - (6) Digestive
 - (7) Urinary
 - (8) Reproductive
 - (9) Endocrine
 - (10) Sensory
- h. Body systems, ABNORMAL structure and function, recognition and etiology
 - (1) Integumentary
 - (2) Musculoskeletal
 - (3) Nervous
 - (4) Cardiovascular, hematopoietic, and lymphatic
 - (5) Respiratory
 - (6) Digestive
 - (7) Urinary
 - (8) Reproductive
 - (9) Endocrine
 - (10) Sensory

7. Specimen Collection Techniques

a. Methods of collection

- (1) Blood
 - (a) Venipuncture technique (site selection/patient prep)
 - (b) Equipment/Needles
 - (c) Tube additives
 - (d) Specimen preparation (serum/plasma/whole blood)
 - (e) Capillary/Dermal puncture (finger, heel, ear)
- (2) Urine
 - (a) Random
 - (b) Midstream clean catch
 - (c) Timed (e.g., 24-hour) collection
 - (d) Catheterization
 - (e) Pediatric urine collection
 - (f) Drug screen/Chain of custody
- (3) Fecal specimen
- (4) Sputum specimen
- (5) Swabs
 - (a) Throat
 - (b) Wound
 - (c) Nasopharyngeal

8. Prepare, Process, and Examine Specimens

- a. Proper specimen labeling
- b. Sources of specimen contamination
- c. Specimen preservation
 - (1) Refrigeration
 - (2) Fixative
- d. Centrifuge
- e. Microscope
- f. Wet mount (saline and KOH) slides

9. Laboratory Quality Control/Quality Assurance/Clinical Laboratory Improvement Act (CLIA) Requirements

- a. Testing records and performance logs
- b. Equipment calibration and maintenance
- c. Quality control testing
- d. Monitor and document temperature controls

10. Laboratory Panels and Selected Tests

- a. Urinalysis
 - (1) Physical
 - (2) Chemical
 - (3) Microscopic

b. Hematology

- (1) Hematocrit
- (2) Hemoglobin
- (3) Erythrocytic sedimentation rate (ESR)
- (4) Automated cell counts
 - (a) Red blood cell (RBC)
 - (b) White blood cell (WBC)
 - (c) White cell differential
 - (d) Platelet
- (5) Coagulation testing (INR)

c. Chemistry/Metabolic testing

- (1) Glucose
- (2) Kidney function
- (3) Liver function
- (4) Lipid profile
- (5) Hemoglobin A_{1c}
- (6) Electrolytes
- (7) Thyroid function

d. Specialized testing

- (1) Mononucleosis
- (2) Rapid Group A Streptococcus
- (3) C-reactive protein (CRP)
- (4) HCG (pregnancy test)
- (5) *H. pylori*
- (6) Influenza
- (7) Genetic/Hereditary
- (8) Tuberculosis tests/Purified protein derivative (PPD) skin test
- (9) Cardiovascular
 - (a) Electrocardiography
 - (i) Perform standard 12-lead
 - (ii) Recognize and eliminate artifacts
 - (iii) Recognize rhythms, arrhythmias
 - (b) Holter/Event monitors
 - (c) Cardiac stress test
- (10) Vision
 - (a) Color vision
 - (b) Visual acuity
 - (i) Near vision
 - (ii) Distance vision
 - (c) Ocular pressure/Tonometry
 - (d) Visual fields
- (11) Audiometric/Hearing
 - (a) Pure tone audiometry
 - (b) Speech and word recognition
 - (c) Tympanometry
- (12) Allergy
 - (a) Scratch test
 - (b) Intradermal skin test
 - (c) Patch test
 - (d) Radioallergosorbent test (RAST)
- (13) Respiratory
 - (a) Pulmonary function tests (PFTs)
 - (b) Spirometry

(c) Peak flow rate

- (14) Diagnostic imaging (e.g., MRI, CT scan, nuclear, ultrasound)

- e. Differentiate between normal and abnormal laboratory and diagnostic test results

D. Pharmacology

(Visit "www.clinicalcalc.com" for the 50 most commonly used medications.)

1. Medications

- a. Classes of drugs
- b. Drug actions/Desired effects/Indications for use
- c. Adverse reactions/Side effects/Allergic reactions
- d. Contraindications
- e. Storage of drugs/Inventory control

2. Preparing and Administering Oral and Parenteral Medications

- a. Rights of medication administration
- b. Dosage of medications
 - (1) Metric conversion
 - (2) Units of measure
 - (3) Calculations of medication dosage
- c. Routes of administration including safety precautions
 - (1) Intramuscular
 - (a) Z-track
 - (2) Subcutaneous
 - (3) Oral/Sublingual/Buccal
 - (4) Topical/Transdermal
 - (5) Inhalation
 - (6) Instillation (eye, ear, nose)
 - (7) Intradermal
 - (8) Vaginal/Rectal
- d. Injections
 - (1) Site selection
 - (2) Needle length and gauge
- e. Medication documentation
 - (1) Documenting administration of medications
 - (2) Reporting medication errors

3. Immunization Resources

- a. Centers for Disease Control and Prevention (CDC)
 - (1) Childhood/Adult immunizations
 - (2) Recordkeeping for immunizations
 - (3) Vaccine Information Statement (VIS)
 - (4) Vaccine Adverse Event Reporting System (VAERS)
 - (5) Vaccine storage

II. General

E. Legal and Ethical Issues

1. Health Insurance Portability and Accountability Act (HIPAA)

- a. Maintain confidentiality/patient privacy (verbal and written)
- b. Health Information Technology for Economic and Clinical Health Act (HITECH)
- c. Patients' right to inspect, amend, and restrict access to their medical records
- d. Patients' Bill of Rights legislation/Patient Care Partnership
- e. Security of electronic transmission of information (encryption, password, firewall, activity log)

2. Protected Health Information (PHI)

- a. Authorization to release
 - (1) Drug and alcohol treatment records
 - (2) HIV-related information
 - (3) Mental health records
 - (4) Genetic Information Nondiscrimination Act of 2008 (GINA)
 - (5) Release for continuity of care
- b. Authorization to rescind release
- c. Use and disposal of PHI

3. Consent

- a. Informed/Written
- b. Implied/Verbal
- c. Exceptions (e.g., mature or emancipated minor, dependent adult, emergency situations)

4. Federal and State Regulations

- a. Professional Liability Torts
 - (1) Negligence
 - (2) Slander
 - (3) Libel
 - (4) Abandonment
 - (5) Assault
 - (6) Battery
- b. Current standard of care
- c. Legal terms and doctrines
 - (1) Subpoena/Subpoena duces tecum
 - (2) Deposition

- (3) Respondeat superior
 - (4) Good Samaritan laws/acts
- d. Contracts (physician-patient relationships)
 - (1) Legal obligations to the patient
 - (2) Termination of medical care
 - (a) Elements/Behaviors for withdrawal of care
 - (b) Patient notification/documentation

5. Pharmaceutical Laws

- a. Prescriptions/e-Prescribing
- b. Drug schedules
- c. Controlled substances (use and abuse)

6. Mandatory Reporting/Public Health Statutes

- a. Communicable diseases
- b. Vital statistics
- c. Abuse/Neglect/Exploitation of child, elder, partner
- d. Wounds of violence

7. Ethical Standards (Behaviors, Decisions, and Reporting)

8. Medical Directives

- a. Advance directives
- b. Living will (Do Not Resuscitate [DNR] and Do Not Intubate [DNI])
- c. Medical durable power of attorney
- d. Patient Self Determination Act (PSDA)

F. Communication

1. Interpersonal Relationship Skills/ Customer Service

- a. Understanding human behavior and mental health
- b. Defense mechanisms: recognition and adaptive responses
- c. Identify and adapt approach to communication barriers with empathy and compassion
 - (1) Death and dying/Terminal illness
 - (2) Visually/Hearing impaired/Interpreter
 - (3) Non-English speaking/English as a second language/Interpreter

- (4) Americans with Disabilities Act Amendments Act (ADAAA) compliance
- (5) Illiterate
- (6) Intellectually challenged
- (7) Age-specific therapeutic/adaptive responses
 - (a) Geriatric
 - (b) Pediatric/Adolescent

- d. Non-verbal communication (e.g., posture, facial expression, eye contact, gestures, touch)
- e. Personal boundaries (e.g., sexual harassment, bullying, unwanted attention)
- f. De-escalation techniques
- g. Listening skills
- h. Service recovery/Patient satisfaction

2. Therapeutic/Adaptive Responses

- a. Cultural diversity and beliefs
- b. Recognize stereotypes and biases and display impartial conduct (race, religion, age, gender, etc.)

3. Learning Styles

- a. Assessing and adapting to level of understanding (sender-receiver-feedback)
- b. Identifying and overcoming barriers to communication (internal/external/environmental distractions)

4. Health Care Team Roles

- a. Understanding/Communicating plan of care and referral coordination
- b. Serving as patient navigator/advocate/case manager/health coach
- c. Utilizing a team approach to patient care management
- d. Identifying medical specialties

5. Professional Telephone Etiquette/Techniques

- a. Message protocols
- b. Screening/Gathering data

III. Administrative

G. Billing, Coding and Insurance

1. Coding Applications

- a. Procedural coding (Current Procedural Terminology [CPT])
 - (1) Modifiers
 - (2) Upcoding/Downcoding
 - (3) Bundling/Unbundling of charges
- b. Diagnostic coding (International Classification of Diseases, Clinical Modification [ICD-CM])
- c. Healthcare Common Procedure Coding System (HCPCS Level II)
- d. Linkage of procedure and diagnostic coding to meet medical necessity guidelines

2. Insurance Fraud and/or Abuse

3. Coverage for Patient Services and Waivers

- a. Insurance eligibility verification
- b. Insurance claims
 - (1) Submission
 - (2) Explanation of benefits (for patients)
 - (3) Remittance advice (for providers)
 - (4) Claim rejection and follow-up
 - (5) Tracking unpaid claims
- c. Advance Beneficiary Notice (ABN)

4. Insurance Types/Third-Party Payers

- a. Commercial plans
- b. Medicare/Medicare Advantage Plans
- c. Medicaid/State Children's Health Insurance Program (SCHIP)
- d. TRICARE/CHAMPVA
- e. Managed care
- f. Workers' compensation

5. Authorizations and Resources

- a. Precertification/Prior authorization
 - (1) Diagnostic and surgical procedures
 - (2) Medications/Drug formulary
- b. Denials/Appeals

6. Financial Terminology

- a. Accounts receivable
- b. Accounts payable
- c. Debits

- d. Credits/Credit balance
- e. Deductible

7. Patient Account Financial Procedures

- a. Post charges
- b. Post payments
- c. Post adjustments/Write-offs
- d. End-of-day reconciliation

8. Financial Calculations

9. Billing/Collections

- a. Itemized statements
- b. Aging of accounts
- c. Collecting payments (e.g., co-pay, pre-pay, co-insurance, self-pay)
- d. Preplanned payment options/credit arrangements
- e. Use of collection agencies
- f. Account collection rules

b. Recognize/Identify/Organize medical reports

- (1) History and physical
- (2) Discharge summary
- (3) Operative note
- (4) Diagnostic test/Laboratory report
- (5) Clinic progress note
- (6) Consultation report
- (7) Growth charts, graphs, tables

c. Medical record preparation/Pre-visit planning

- (1) Obtain copy of patients' outside medical record and/or pertinent test results

H. Scheduling Appointments and Health Information Management

1. Scheduling Appointments

- a. New patient
- b. Established patient
- c. Routine versus urgent
- d. Coordinate facility/equipment/personnel requirements
- e. Ancillary services (laboratory, X-ray, surgery, outpatient procedures, hospital admissions)
- f. Cancellations/No-shows/Physician delay or unavailability

2. Medical Reception/Patient Registration

- a. Patient identification/Obtain patient demographics
- b. Identity theft protection
- c. Obtain accurate billing information

3. Electronic Health Records

- a. Patient portal



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A CREDIT TO THE CREDENTIAL

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“ THIS RECOGNITION DEMONSTRATES THE AAMA’S COMMITMENT TO ENSURING THAT MEDICAL ASSISTANTS WITH THE CMA (AAMA) CREDENTIAL MEET THE HIGHEST STANDARDS. ”

– AAMA CEO AND LEGAL COUNSEL DONALD A. BALASA, JD, MBA

