



PANCE Exam Blueprint

Medical Content Categories

Category	% Allocation
Cardiovascular System	13%
Dermatologic System	5%
Endocrine System	7%
Eyes, Ears, Nose, and Throat	7%
Gastrointestinal System / Nutrition	9%
Genitourinary System (Male and Female)	5%
Hematologic System	5%
Infectious Diseases	6%
Musculoskeletal System	8%
Neurologic System	7%
Psychiatry / Behavioral Science	6%
Pulmonary System	10%
Renal System	5%
Reproductive System (Male and Female)	7%

Task Categories

Category	% Allocation
History Taking and Performing Physical Examination	17%
Using Diagnostic and Laboratory Studies	12%
Formulating Most Likely Diagnosis	18%
Health Maintenance, Patient Education, and Preventive Measures	10%
Clinical Intervention	14%
Pharmaceutical Therapeutics	14%
Applying Basic Scientific Concepts	10%
Professional Practice	5%

The PANCE exam blueprint provided by the NCCPA lists “examples provided for each medical content and task category,” stating that these examples are “indicative of the types of information that will be included on the exam.”

Medical Content Categories

Cardiovascular System 13%

Cardiomyopathy

- Dilated
- Hypertrophic
- Restrictive

Conduction disorders/dysrhythmias

- Atrial fibrillation/flutter
- Atrioventricular block
- Bundle branch block
- Paroxysmal supraventricular tachycardia
- Premature beats
- Sick sinus syndrome
- Sinus arrhythmia
- Torsades de pointes
- Ventricular fibrillation
- Ventricular tachycardia

Congenital heart disease

- Atrial septal defect
- Coarctation of aorta
- Patent ductus arteriosus
- Tetralogy of Fallot
- Ventricular septal defect

Coronary artery disease

- Acute myocardial infarction
 - Non–ST-segment elevation
 - ST-segment elevation
- Angina pectoris
 - Prinzmetal variant
 - Stable
 - Unstable

Heart failure

Hypertension

- Essential hypertension

- Hypertensive emergencies
- Secondary hypertension

Hypotension

- Cardiogenic shock
- Orthostatic hypotension
- Vasovagal hypotension

Lipid disorders

- Hypercholesterolemia
- Hypertriglyceridemia

Traumatic, infectious, and inflammatory heart conditions

- Acute and subacute bacterial endocarditis
- Acute pericarditis
- Cardiac tamponade
- Pericardial effusion

Valvular disorders

- Aortic
- Mitral
- Pulmonary
- Tricuspid

Vascular disease

- Aortic aneurysm/dissection
- Arterial embolism/thrombosis
- Arteriovenous malformation
- Giant cell arteritis
- Peripheral artery disease
- Phlebitis/thrombophlebitis
- Varicose veins
- Venous insufficiency
- Venous thrombosis

Dermatologic System 5%

Acneiform eruptions

- Acne vulgaris
- Folliculitis
- Rosacea

Desquamation

- Erythema multiforme
- Stevens-Johnson syndrome

- Toxic epidermal necrolysis

Diseases/disorders of the hair and nails

- Alopecia
- Onychomycosis
- Paronychia

Envenomations and arthropod bite reactions

Exanthems

- Erythema infectiosum (fifth disease)
- Hand-foot-and-mouth disease
- Measles

Infectious diseases

- Bacterial
 - Cellulitis
 - Erysipelas
 - Impetigo
- Fungal
 - Candidiasis
 - Dermatophyte infections
- Parasitic
 - Lice
 - Scabies
- Viral
 - Condyloma acuminatum
 - Herpes simplex
 - Molluscum contagiosum
 - Varicella-zoster virus infections
 - Verrucae

Keratotic disorders

- Actinic keratosis
- Seborrheic keratosis

Neoplasms

- Benign
- Malignant
- Premalignant

Papulosquamous disorders

- Contact dermatitis
- Drug eruptions

- Eczema
- Lichen planus
- Pityriasis rosea
- Psoriasis

Pigment disorders

- Melasma
- Vitiligo

Skin integrity

- Burns
- Lacerations
- Pressure ulcers
- Stasis dermatitis

Vascular abnormalities

- Cherry angioma
- Telangiectasia

Vesiculobullous disease

- Pemphigoid
- Pemphigus

Other dermatologic disorders

- Acanthosis nigricans
- Hidradenitis suppurativa
- Lipomas/epidermal inclusion cysts
- Photosensitivity reactions
- Pilonidal disease
- Urticaria

Endocrine System 7%

Adrenal disorders

- Primary adrenal insufficiency
- Cushing syndrome

Diabetes mellitus

- Type 1
- Type 2

Hypogonadism

Neoplasms

- Multiple endocrine neoplasia
- Neoplastic syndrome
- primary endocrine malignancy
- Syndrome of inappropriate antidiuretic hormone secretion (SIADH)

Parathyroid disorders

- Hyperparathyroidism
- Hypoparathyroidism

Pituitary disorders

- Acromegaly/gigantism
- Diabetes insipidus
- Dwarfism
- Pituitary adenoma

Thyroid disorders

- Hyperthyroidism
- Hypothyroidism
- Thyroiditis

Eyes, Ears, Nose, and Throat 7%

Eye disorders

- Conjunctival disorders
 - Conjunctivitis
- Corneal disorders
 - Cataract
 - Corneal ulcer
 - Infectious
 - Keratitis
 - Pterygium
- Lacrimal disorders
 - Dacryocystitis
- Lid disorders
 - Blepharitis
 - Chalazion
 - Ectropion
 - Entropion
 - Hordeolum
- Neuro-ophthalmologic disorders
 - Nystagmus
 - Optic neuritis
 - Papilledema
- Orbital disorders
 - Orbital cellulitis
- Retinal disorders
 - Macular degeneration
 - Retinal detachment
 - Retinopathy
- Traumatic disorders
 - Blowout fracture
 - Corneal abrasion
 - Globe rupture
 - Hyphema
- Vascular disorders
 - Retinal vascular occlusion
- Vision abnormalities
 - Amaurosis fugax
 - Amblyopia
 - Glaucoma
 - Scleritis
 - Strabismus

Ear disorders

- External ear
 - Cerumen impaction
 - Otitis externa
 - Trauma
- Inner ear
 - Acoustic neuroma
 - Barotrauma
 - Dysfunction of eustachian tube
 - Labyrinthitis
 - Vertigo

- Middle ear
 - Cholesteatoma
 - Otitis media
 - Tympanic membrane perforation
- Hearing impairment
- Other abnormalities of the ear
 - Mastoiditis
 - Meniere disease
 - Tinnitus

Foreign bodies

Neoplasms

- Benign
- Malignant

Nose/sinus disorders

- Epistaxis
- Nasal polyps
- Rhinitis
- Sinusitis
- Trauma

Oropharyngeal disorders

- Diseases of the teeth/gums
- Infectious/inflammatory disorders
 - Aphthous ulcers
 - Candidiasis
 - Deep neck infection
 - Epiglottitis
 - Herpes simplex
 - Laryngitis
 - Peritonsillar abscess
 - Pharyngitis
- Salivary disorders
 - Sialadenitis
 - Parotitis
- Trauma
- Other oropharyngeal disorders
 - Leukoplakia

Gastrointestinal System / Nutrition 9%

Biliary disorders

- Acute/chronic cholecystitis
- Cholangitis
- Cholelithiasis

Colorectal disorders

- Abscess/fistula
- Anal fissure
- Constipation
- Diverticulitis
- Fecal impaction
- Hemorrhoids
- Inflammatory bowel disease
- Irritable bowel syndrome
- Ischemic bowel disease
- Obstruction
- Polyps
- Toxic megacolon

Esophageal disorders

- Esophagitis
- Gastroesophageal reflux disease
- Mallory-Weiss tear
- Motility disorders
- Strictures
- Varices

Food allergies and food sensitivities

- Gluten intolerance
- Lactose intolerance
- Nut allergies

Gastric disorders

- Gastritis
- Peptic ulcer disease
- Pyloric stenosis

Hepatic disorders

- Acute/chronic hepatitis
- Cirrhosis

Hernias

Infectious diarrhea

Ingestion of toxic substances or foreign bodies

Metabolic disorders

- G6PD deficiency
- Paget disease
- Phenylketonuria
- Rickets

Neoplasms

- Benign
- Malignant

Nutritional and vitamin disorders

- Hypervitaminosis/hypovitaminosis
- Obesity

Pancreatic disorders

- Acute/chronic pancreatitis

Small intestine disorders

- Appendicitis
- Celiac disease
- Intussusception
- Obstruction
- Polyps

Genitourinary System (Male and Female) 5%

Bladder disorders

- Incontinence
- Overactive bladder
- Prolapse

Congenital and acquired abnormalities

- Cryptorchidism
- Peyronie disease
- Trauma
- Vesicoureteral reflux

Human sexuality

Infectious disorders

- Cystitis
- Epididymitis
- Orchitis
- Prostatitis
- Pyelonephritis
- Urethritis

Neoplasms

- Bladder cancer
- Penile cancer

- Prostate cancer
- Testicular cancer

Nephrolithiasis/urolithiasis

Penile disorders

- Erectile dysfunction
- Hypospadias/epispadias
- Paraphimosis/phimosis

Prostate disorders

- Benign prostatic hyperplasia

Testicular disorders

- Hydrocele/varicocele
- Testicular torsion

Urethral disorders

- Prolapse
- Stricture

Hematologic System 5%

Autoimmune disorders

Coagulation disorders

- Clotting factor disorders
- Thrombocytopenias

Cytopenias

- Anemia
- Leukopenia

Cytoses

- Polycythemia
- Thrombocytosis

Hemoglobinopathies

- Hemochromatosis
- Sickle cell disease
- Thalassemia

Immunologic disorders

- Transfusion reaction

Neoplasms, premalignancies, and malignancies

- Acute/chronic lymphocytic leukemia
- Acute/chronic myelogenous leukemia
- Lymphoma
- Multiple myeloma
- Myelodysplasia

Infectious Diseases 6%

Bacterial diseases

- Botulism
- Campylobacter jejuni infection
- Chlamydia
- Cholera
- Diphtheria
- Gonococcal infections
- Gonorrhea
- Methicillin-resistant Staphylococcus aureus infection
- Rheumatic fever
- Rocky Mountain spotted fever
- Salmonellosis
- Shigellosis
- Tetanus

Fungal diseases

- Candidiasis
- Cryptococcosis
- Histoplasmosis
- Pneumocystis

Mycobacterial diseases

- Atypical mycobacterial disease
- Tuberculosis

Parasitic diseases

- Helminth infestations
- Malaria
- Pinworms
- Toxoplasmosis
- Trichomoniasis

Prenatal transmission of disorders

- Congenital varicella
- Herpes simplex virus
- Human papillomavirus
- Zika virus

Sepsis/systemic inflammatory response syndrome

Spirochetal diseases

- Lyme disease
- Syphilis

Viral diseases

- Cytomegalovirus infections
- Epstein-Barr virus infections
- Erythema infectiosum
- Herpes simplex virus infections
- HIV infection
- Human papillomavirus infections

- Influenza
- Measles
- Mumps
- Rabies
- Roseola
- Rubella
- Varicella-zoster virus infections

Musculoskeletal System 8%

Chest/rib disorders

- Deformities
- Fractures

Compartment syndrome

Degenerative diseases

- Osteoarthritis

Infectious diseases

- Osteomyelitis
- Septic arthritis

Lower extremity disorders

- Avascular necrosis
- Developmental dysplasia
- Fractures/dislocations
- Osgood-Schlatter disease
- Slipped capital femoral epiphysis
- Soft-tissue injuries

Neoplasms

- Benign
- Malignant

Rheumatologic disorders

- Fibromyalgia
- Gout/pseudogout
- Juvenile rheumatoid arthritis

- Osteoporosis
- Polyarteritis nodosa
- Polymyalgia rheumatica
- Polymyositis
- Reactive arthritis
- Rheumatoid arthritis
- Sjögren syndrome
- Systemic lupus erythematosus
- Systemic sclerosis (Scleroderma)

Spinal disorders

- Ankylosing spondylitis
- Cauda equina syndrome
- Herniated nucleus pulposus
- Kyphosis
- Scoliosis
- Spinal stenosis
- Sprain/strain
- Thoracic outlet syndrome
- Torticollis
- Trauma

Upper extremity disorders

- Fractures/dislocations
- Soft-tissue injuries

Neurologic System 7%

Closed head injuries

- Concussion
- Postconcussion syndrome
- Traumatic brain injury

Cranial nerve palsies

Encephalopathic disorders

Headaches

- Cluster headache
- Migraine
- Tension headache

Infectious disorders

- Encephalitis
- Meningitis

Movement disorders

- Essential tremor
- Huntington disease
- Parkinson disease
- Tourette disorder

Neoplasms

- Benign
- Malignant

Neurocognitive disorders

- Delirium
- Major/mild neurocognitive disorders

Neuromuscular disorders

- Cerebral palsy
- Multiple sclerosis
- Myasthenia gravis

Peripheral nerve disorders

- Carpal tunnel syndrome
- Complex regional pain syndrome
- Guillain-Barré syndrome
- Peripheral neuropathy

Seizure disorders

- Focal seizures
- Generalized seizures
- Status epilepticus

Vascular disorders

- Arteriovenous malformation
- Cerebral aneurysm
- Intracranial hemorrhage
- Stroke
- Syncope
- Transient ischemic attack

Psychiatry / Behavioral Science 6%

Abuse and neglect

- Child abuse
- Domestic violence
- Elder abuse
- Sexual abuse

Anxiety disorders

- Generalized anxiety disorder
- Panic disorder
- Phobias

Bipolar and related disorders

Depressive disorders

- Major depressive disorder
- Persistent depressive disorder (dysthymia)
- Premenstrual dysphoric disorder
- Suicidal/homicidal behaviors

Disruptive, impulse-control, and conduct disorders

- Conduct disorder

Dissociative disorders

Feeding and eating disorders

Human sexuality

Obsessive-compulsive and related disorders

Neurodevelopmental disorders

- Attention-deficit/hyperactivity disorder
- Autism spectrum disorder

Personality disorders

Schizophrenia spectrum and other psychotic disorders

Sleep-wake disorders

- Narcolepsy
- Parasomnias

Somatic symptom and related disorders

Substance-related and addictive disorders

Trauma- and stressor-related disorders

- Adjustment disorders
- Post-traumatic stress disorder

Pulmonary System 10%

Chronic obstructive pulmonary diseases

- Chronic bronchitis
- Emphysema

Infectious disorders

- Acute bronchiolitis
- Acute bronchitis
- Acute epiglottitis
- Croup
- Influenza
- Pertussis
- Pneumonias
 - Bacterial
 - Fungal
 - HIV-related
 - Viral
- Respiratory syncytial virus infection
- Tuberculosis

Neoplasms

- Carcinoid tumors
- Lung cancer
- Pulmonary nodules

Pleural diseases

- Pleural effusion
- Pneumothorax

Pulmonary circulation

- Cor pulmonale
- Pulmonary embolism
- Pulmonary hypertension

Restrictive pulmonary diseases

- Idiopathic pulmonary fibrosis
- Pneumoconiosis
- Sarcoidosis

Sleep apnea/Obesity hypoventilation syndrome

Other pulmonary disorders

- Acute respiratory distress syndrome
- Asthma
- Cystic fibrosis
- Foreign body aspiration
- Hyaline membrane disease

Renal System 5%

Acute disorders

- Glomerulonephritis
- Nephrotic syndrome
- Pyelonephritis

Acute kidney injury (acute renal failure)

Chronic kidney disease

Congenital or structural renal disorders

- Horseshoe kidney
- Hydronephrosis
- Polycystic kidney disease
- Renal vascular disease

End-stage renal disease

Fluid and electrolyte disorders

- Acid-base disorders
- Dehydration
- Hyperkalemia/hypokalemia
- Hypervolemia
- Hyponatremia

Neoplasms

- Renal cell carcinoma
- Wilms tumor

Reproductive System (Male and Female) 7%

Breast disorders

- Abscess
- Fibroadenoma
- Fibrocystic changes
- Galactorrhea
- Gynecomastia
- Mastitis

Cervical disorders

- Cervicitis
- Dysplasia

Complicated pregnancy

- Abortion
- Abruptio placentae
- Breech presentation
- Cesarean delivery
- Cord prolapse
- Dystocia
- Ectopic pregnancy
- Fetal distress
- Gestational diabetes
- Gestational trophoblastic disease
- Hypertension disorders in pregnancy
- Incompetent cervix
- Multiple gestation
- Placenta previa
- Postpartum hemorrhage
- Premature rupture of membranes
- Rh incompatibility
- Shoulder dystocia

Contraceptive methods

Human sexuality

Infertility

Menopause

Menstrual disorders

Neoplasms of the breast and reproductive tract

- Benign
- Malignant

Ovarian disorders

- Cysts
- Polycystic ovarian syndrome
- Torsion

Sexually transmitted infections/Pelvic inflammatory disease

Trauma

- Physical assault
- Sexual assault
- Trauma in pregnancy

Uncomplicated pregnancy

- Normal labor/delivery
- Postnatal/postpartum care
- Preconception/prenatal care

Uterine disorders

- Endometriosis
- Leiomyoma
- Prolapse

Vaginal/vulvar disorders

- Cystocele
- Prolapse
- Rectocele
- Vaginitis

Task Categories

History Taking and Performing Physical Examination 17%

Knowledge of:

- General physical examination components and techniques
- Pertinent historical information
- Risk factors for development of significant medical conditions
- Significant physical examination findings
- Signs and symptoms of significant medical conditions

Skill in:

- Conducting comprehensive and/or problem-based interviews and physical examinations
- Eliciting patient information from other sources
- Identifying conditions requiring referral to or consultation with specialists
- Identifying pertinent patient and family historical information from patients and caregivers
- Identifying pertinent physical examination information
- Triaging of patients based on recognition of abnormal vital signs, examination findings, and/or general observations

Using Diagnostic and Laboratory Studies 12%

Knowledge of:

- Appropriate patient education relating to diagnostic and laboratory studies
- Indications for initial and subsequent diagnostic and laboratory studies
- Indications for preventive screening tests
- Risks associated with diagnostic and laboratory studies

Skill in:

- Collecting diagnostic and laboratory specimens
- Communicating risks, benefits, and results effectively to other members of the healthcare team
- Communicating risks, benefits, and results effectively to patients, families, and caregivers
- Reviewing and interpreting results of diagnostic and laboratory studies, and correlating the results with history and physical examination findings
- Selecting appropriate diagnostic and/or laboratory studies
- Using diagnostic equipment safely and appropriately

Formulating Most Likely Diagnosis 18%

Knowledge of:

- Significance of diagnostic and laboratory studies as they relate to diagnosis
- Significance of history as it relates to the differential diagnosis
- Significance of physical examination findings as they relate to diagnosis

Skill in:

- Developing multiple differential diagnoses for complicated and/or multisystem cases
- Formulating most likely differential diagnoses
- Incorporating history, physical examination findings, and diagnostic data into medical decision-making
- Recognizing the need for referral to a specialist
- Selecting the most likely diagnosis in light of presented data

Health Maintenance, Patient Education, and Preventive Measures 10%

Knowledge of:

- Appropriate patient education regarding preventable conditions and lifestyle modifications
- Early detection and prevention of medical conditions
- Effects of aging and changing family roles
- Genetic testing and counseling
- Human growth and development
- Human sexuality and gender identity, gender transition, and associated medical issues
- Immunization schedules and recommendations for infants, children, adults, and foreign travelers/adoptions
- Impact of patient demographics on risks for medical conditions
- Prevention of communicable diseases
- Preventive screening recommendations
- Psychosocial effects of illness, stress, and injury as well as related healthy coping strategies
- Signs of abuse and neglect

Skill in:

- Adapting health maintenance to an individual patient's context
- Communicating effectively with and educating patients, family members, and caregivers regarding medical conditions
- Conducting education on modifiable risk factors with an emphasis on primary and secondary prevention
- Using counseling techniques

Clinical Intervention 14%

Knowledge of:

- Clinical procedures and their indications, contraindications, complications, risks, benefits, and techniques
- Conditions that constitute medical emergencies
- Criteria for admission to or discharge from the hospital or other facilities
- Management, treatment, and follow-up of medical conditions
- Palliative care and end-of-life issues
- Roles of other health professionals
- Sterile technique
- Therapeutic regimens
- Universal precautions and special isolation conditions

Skill in:

- Demonstrating technical expertise related to performing specific procedures
- Evaluating patient response to treatment/intervention
- Facilitating patient/caregiver adherence to and active participation in treatment
- Formulating and implementing treatment plans in accordance with applicable practice guidelines
- Interfacing in multidisciplinary teams, including education of other health care professionals
- Making appropriate dispositions
- Monitoring and managing nutritional status
- Prioritizing tasks
- Recognizing and initiating treatment for life-threatening conditions
- Using community resources to meet the needs of patients/caregivers

Pharmaceutical Therapeutics 14%

Knowledge of:

- Adverse effects, reactions, and toxicities
- Common alternative/complementary therapies and their interactions and toxicities
- Contraindications
- Drug interactions, including presentation and treatment
- Indications for use
- Mechanism of action
- Methods to reduce medication errors
- Monitoring and follow-up of pharmacologic regimens
- Presentation and treatment of allergic reactions
- Regulation of controlled substances
- Special populations requiring drug/dose modification
- Substances of abuse

Skill in:

- Assessing patient adherence to drug regimens
- Drafting a prescription
- Evaluating, treating, and reporting adverse drug reactions and/or adverse effects
- Identifying and managing medication misuse
- Interacting with pharmacists to address medication issues
- Maintaining knowledge of relevant pharmacologic agents
- Monitoring pharmacologic regimens and adjusting as appropriate
- Prescribing controlled substances appropriately
- Selecting appropriate pharmacologic therapy and dosing

Applying Basic Scientific Concepts 10%

Knowledge of:

- Basic biochemistry
- Basic genetics
- Human anatomy and physiology
- Microbiology
- Pathophysiology and immunology

Skill in:

- Evaluating emerging medical trends critically as they relate to patient care
- Maintaining awareness of trends in infectious disease
- Relating pathophysiologic principles to specific disease processes

Professional Practice 5%

Legal/medical ethics

Knowledge of:

- Cultural and religious beliefs related to health care
- Informed consent and refusal process
- Living will, advance directives, organ donation, code status, do not resuscitate, do not intubate, medical power of attorney, etc.
- Medicolegal issues
- Patient/provider rights and responsibilities
- Privacy, security, and responsibility related to medical record documentation and management

Skill in:

- Caring for patients with cognitive impairment

Medical informatics

Knowledge of:

- Billing/coding to maintain accuracy and completeness for reimbursement and administrative purposes

Skill in:

- Demonstrating appropriate medical record documentation
- Using appropriate medical informatics sources

Patient care and communication (individual patients)

Knowledge of:

- Affordable and effective health care that is patient specific
- Cultural and religious diversity
- Stewardship of patient and community resources

Skill in:

- Acknowledging and applying patient/provider rights and responsibilities
- Ensuring patient satisfaction
- Providing patient advice and education regarding the informed consent and refusal process
- Providing patient advice *and education related to end-of-life decisions*

Physician/PA relationship

Knowledge of:

- Professional and clinical limitations, scope of practice, etc.
- Supervision parameters: malpractice, mandated reporting, conflict of interest, impaired provider, ethical principles

Skill in:

- *Communicating and consulting with the supervising physician and/or other specialists/consultants*

Professional development

Knowledge of:

- *Continuing medical education resources*

Skill in:

- Critically analyzing evidence-based medicine
- Identifying and interpreting data from medical informatics sources and identifying appropriate reference *sources*
- Using epidemiologic techniques to evaluate the spread of disease

Public health (population/society)

Knowledge of:

- Basic disaster preparedness
- Infection control measures and response to outbreaks
- Occupational health issues as they pertain to health care as well as non–health care workers
- Population health, travel health, and epidemiology of disease states

Skill in:

- Protecting vulnerable populations and recognizing disparities in provision of and access to health care

Risk management

Knowledge of:

- Quality improvement and patient safety
- Resource stewardship

Skill in:

- Ensuring patient safety and avoiding medical errors