



**IFOM**<sup>®</sup>  
International Foundations of Medicine

# Clinical Science Examination Content Outline



**NBME**<sup>®</sup>

International Foundations of  
Medicine<sup>®</sup>

National Board of Medical  
Examiners<sup>®</sup>

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# Physician Tasks/Competencies

## Test Specifications

Topic	Range
Medical Knowledge/Scientific Concepts	13%–18%
Patient Care: Diagnosis	43%–48%
Patient Care: Management	32%–37%
Professionalism	1%–2%
Patient Safety	1%–2%
Practice-based Learning	2%–5%

## Medical Knowledge/Scientific Concepts

Applying foundational science concepts

## Patient Care: Diagnosis

History and physical examination

Laboratory and diagnostic studies

Diagnosis

Prognosis/outcome

## Patient Care: Management

Health maintenance and disease prevention

Pharmacotherapy

Clinical interventions

Mixed management

Surveillance for disease recurrence

## Professionalism

Professionalism/legal/ethical issues in interaction with patients and families

Professionalism/legal/ethical issues in interactions with patients and families related to death and dying

Professionalism/legal/ethical issues in interactions with other health professionals

## Patient Safety

## Practice-based Learning

Understanding and application of principles of biostatistics, public health, and epidemiology

Understanding of the principles of research ethics and regulatory issues

# Content Categories

## Test Specifications

Topic	Range
Normal Age-related Findings	1%–3%
Immune System	2%–4%
Blood and Lymphoreticular System	4%–6%
Behavioral Health	3.5%–5.5%
Nervous System and Special Senses	8.5%–10.5%
Skin and Subcutaneous Tissue	3.5%–5.5%
Musculoskeletal System	6%–8%
Cardiovascular System	8%–10%
Respiratory System	8.5%–10.5%
Gastrointestinal System	8%–10%
Renal and Urinary Systems	4.5%–6.5%
Pregnancy, Childbirth, and the Puerperium	4%–6%
Female Reproductive System & Breast	6%–8%
Male Reproductive System	1%–3%
Endocrine System	6%–8%
Multisystem Processes & Disorders	6%–8%
Biostatistics, Epidemiology, and Public/Population Health	3%–5%
Social Sciences	1%–3%

## Normal Age-related Findings

Infancy and Childhood (0 to 12 years)

Adolescence (13-17 years)

Adulthood (18-64 years)

Senescence (65 years and older)

## Immune System

Disorders associated with immunodeficiency

HIV/AIDS

Immunologically mediated disorders

Adverse effects of drugs on the immune system

## Blood and Lymphoreticular System

Infectious and immunologic

Neoplasms

Anemia, cytopenias, and polycythemia

Coagulation disorders (hypocoagulable and hypercoagulable conditions)

Traumatic, mechanical, and vascular disorders

Congenital disorders

Adverse effects of drugs on the hematologic and lymphoreticular systems

## **Behavioral Health**

Psychotic disorders

Anxiety disorders

Mood disorders

Somatoform disorders

Factitious disorders

Eating disorders and impulse control disorders

Disorders originating in infancy/childhood

Personality disorders

Psychosocial disorders/behaviors

Substance use disorders

Adverse effects of drugs

## **Nervous System and Special Senses**

Infectious, immunologic, inflammatory disorders

Neoplasms (cerebral, spinal, and peripheral)

Cerebrovascular disease

Disorders relating to the spine, spinal cord, and spinal nerve roots

Cranial and peripheral nerve disorders

Neurologic pain syndromes

Degenerative disorders/amnestic syndromes

Global cerebral dysfunction

Neuromuscular disorders

Movement disorders

Metabolic disorders

Paroxysmal disorders

Sleep disorders

Traumatic and mechanical disorders and disorders of increased intracranial pressure

Congenital disorders

Adverse effects of drugs on the nervous system

Disorders of the eye and the eyelid

Disorders of the ear

## **Skin and Subcutaneous Tissue**

Infectious, immunologic, and inflammatory disorders

Neoplasms

Adnexal disorders (hair and hair follicles, nails, sweat gland, sebaceous glands, oral mucous membranes)

Oral disease

Disorders of pigmentation

Traumatic and mechanical disorders

Congenital disorders

Adverse effects of drugs on skin and subcutaneous tissue

## **Musculoskeletal System**

Infectious, immunologic, and inflammatory disorders

Neoplasms

Degenerative and metabolic disorders

Traumatic and mechanical disorders

Congenital disorders

Adverse effects of drugs on the musculoskeletal system

## **Cardiovascular System**

Infectious, immunologic, and inflammatory disorders

Neoplasms

Dysrhythmias

Heart failure

Ischemic heart disease

Diseases of the myocardium

Diseases of the pericardium  
Valvular heart disease  
Hypotension  
Hypertension  
Dyslipidemia  
Vascular disorders  
Traumatic and mechanical disorders  
Congenital disorders  
Adverse effects of drugs on the cardiovascular system

## **Respiratory System**

Infectious, immunologic, and inflammatory disorders  
Neoplasms  
Obstructive airway disease  
Pneumoconiosis/fibrosing/restrictive pulmonary disorders/interstitial lung disease  
Respiratory failure/respiratory arrest and pulmonary vascular disorders  
Metabolic, regulatory, and structural disorders  
Disorders of the pleura, mediastinum, and chest wall  
Traumatic and mechanical disorders  
Congenital disorders  
Adverse effects of drugs on the respiratory system

## **Gastrointestinal System**

Infectious, immunological, and inflammatory disorders  
Neoplasms  
Signs, symptoms, and ill-defined disorders  
Disorders of the oral cavity, salivary glands, and esophagus  
Disorders of the stomach, small intestine, colon, rectum, and anus  
Disorders of the liver and biliary system, noninfectious  
Disorders of the pancreas  
Disorders of the peritoneal cavity

Traumatic and mechanical disorders

Congenital disorders

Adverse effects of drugs on the gastrointestinal system

## **Renal and Urinary Systems**

Infectious, immunologic, and inflammatory disorders

Neoplasms

Signs, symptoms, and ill-defined disorders

Metabolic and regulatory disorders

Vascular disorders

Traumatic and mechanical disorders

Congenital disorders

Adverse effects of drugs on the renal and urinary system

## **Pregnancy, Childbirth, and the Puerperium**

Prenatal care

Obstetric complications

Labor and delivery

Puerperium, including complications

Newborn (birth to 4 weeks of age)

Congenital disorders, neonatal

Adverse effects of drugs on pregnancy, childbirth, and the puerperium

Systemic disorders affecting pregnancy, labor and delivery, and puerperium

## **Female Reproductive System & Breast**

Infectious, immunologic, and inflammatory disorders

Neoplasms of the breast, cervix, ovary, uterus, vagina, and vulva

Fertility and infertility

Menopause

Menstrual and endocrine disorders

Sexual dysfunction

Traumatic and mechanical disorders



Congenital disorders

Adverse effects of drugs on the female reproductive system and breast

## **Male Reproductive System**

Infectious, immunologic, and inflammatory disorders

Neoplasms

Metabolic and regulatory disorders, including sexual dysfunction

Traumatic and mechanical disorders

Congenital disorders

Adverse effects of drugs on the male reproductive system

## **Endocrine System**

Diabetes mellitus and other disorders of the endocrine pancreas

Thyroid disorders

Parathyroid disorders

Adrenal disorders

Pituitary disorders

Hypothalamic endocrine disorders

Multiple endocrine neoplasia (MEN1, MEN2)

Congenital disorders

Adverse effects of drugs on the endocrine system

## **Multisystem Processes & Disorders**

Infectious, immunologic, and inflammatory disorders

Neoplasms and related disorders

Signs, symptoms, and ill-defined disorders

Nutrition

Toxins and environmental extremes

Venomous bites and stings

Fluid, electrolyte, and acid-base balance disorders

Abuse

Multiple trauma (e.g., prioritization, blast injury)

Shock, cardiogenic, hypovolemic, neurogenic, septic; sepsis, bacteremia, systemic inflammatory response syndrome (SIRS), refractory, multiorgan dysfunction syndrome

Genetic metabolic and developmental disorders

Adverse effects of drugs on multisystem disorders

## **Biostatistics, Epidemiology, and Public/Population Health**

### **Epidemiology and public/population health**

Measures of disease frequency: incidence/prevalence

Measures of health status

Population pyramids and impact of demographic changes

Disease surveillance and outbreak investigation

Communicable disease transmission

Points of intervention

### **Study design, types and selection of studies**

**Measures of association** (e.g., relative risk, odds ratio, other)

**Principles of testing and screening** (e.g., sensitivity and specificity, predictive value, probability)

**Study interpretation** (e.g., causation, validity, statistical vs. clinical significance)

**Research ethics** (e.g., informed consent, privacy of patient data, regulatory issues)

## **Social Sciences**

### **Medical ethics and jurisprudence**

Consent to treatment/decision-making capacity

Death and dying and palliative care

Physician-patient relationship

Professional conduct/integrity

### **Patient safety (including basic concepts and terminology)**