

Pediatric Emergency Medicine Content Outline

Effective for certifying examinations administered April 1, 2021 and after

Table of Contents

| | |
|--|----|
| Overview | 1 |
| Development of the Pediatric Emergency Medicine Content Outline..... | 1 |
| Content Domains | 1 |
| Universal Tasks | 1 |
| Development and Classification of Exam Questions | 2 |
| Sample Question..... | 2 |
| Exam Weights..... | 3 |
| Detailed Content Outline | 4 |
| Domain 1: Emergency Conditions..... | 4 |
| Domain 2: Resuscitation | 9 |
| Domain 3: Trauma | 9 |
| Domain 4: Toxicology | 10 |
| Domain 5: Environmental Emergencies | 10 |
| Domain 6: Child Abuse and Maltreatment..... | 11 |
| Domain 7: Behavioral Health Disorders and Psychosocial Issues | 11 |
| Domain 8: Special Populations..... | 12 |
| Domain 9: Procedures | 12 |
| Domain 10: Disaster Preparedness..... | 13 |
| Domain 11: Emergency Medical Services and Transport | 13 |
| Domain 12: Emergency Department Administration and Operations..... | 13 |
| Domain 13: Core Knowledge in Scholarly Activities | 14 |

Overview

This content outline was developed to serve as the blueprint for the pediatric emergency medicine (PEM) in-training, initial certification, and maintenance of certification examinations. This outline identifies for all important stakeholders (e.g., prospective candidates, diplomates, the public, training programs, professional associations) the knowledge areas being measured by these exams.

This outline takes effect on April 1, 2021. All PEM exams administered after this date will adhere to the specifications within this outline.

DEVELOPMENT OF THE PEDIATRIC EMERGENCY MEDICINE CONTENT OUTLINE

The initial draft of this content outline was developed by a diverse, representative panel of practicing PEM subspecialists. The panel identified the knowledge required of PEM subspecialists in clinical practice and categorized that knowledge into content domains and subdomains. All board-certified PEM subspecialists (N = 2,388) were then invited to provide feedback via an online survey. A total of 453 PEM subspecialists (19%) rated the frequency and criticality of the content domains and subdomains. The survey also collected open-ended comments from respondents in order to identify any important content areas that were not included in the initial draft.

The survey results were used to make final revisions to the outline and to establish the exam weights (*i.e.*, the percentage of exam questions associated with each content domain). The content domains that were rated as highly critical and frequently required in practice have been weighted more heavily than the domains rated as less critical and/or less frequently required. Establishing the exam weights in this manner helps to ensure that the ABP's PEM exams are measuring the full breadth of knowledge required for clinical practice, while also placing an appropriate amount of emphasis on the content domains that were identified by practicing PEM subspecialists as being critically important.

CONTENT DOMAINS

The knowledge for safe and effective practice as a PEM subspecialist has been categorized into 13 content domains, presented in the table below. A more detailed breakdown of the knowledge within each domain is reflected in the detailed content outline, beginning on page 4. Each exam question included on a PEM exam

(in-training, initial certification, and maintenance of certification) is classified according to the content domain and subdomain to which it is most closely aligned. If an exam question does not align with one of the content subdomains, it is removed from the question pool and is not included on an exam.

Pediatric Emergency Medicine Content Domains

| |
|---|
| 1. Emergency Conditions |
| 2. Resuscitation |
| 3. Trauma |
| 4. Toxicology |
| 5. Environmental Emergencies |
| 6. Child Abuse and Maltreatment |
| 7. Behavioral Health Conditions and Psychosocial Issues |
| 8. Special Populations |
| 9. Procedures |
| 10. Disaster Preparedness |
| 11. Emergency Medical Services and Transport |
| 12. Emergency Department Administration and Operations |
| 13. Core Knowledge in Scholarly Activities |

UNIVERSAL TASKS

To help ensure the clinical relevance of the PEM exams, the panel of PEM subspecialists identified a set of three universal tasks that reflect the primary ways in which medical knowledge can be applied in clinical practice: (1) core science, (2) diagnosis, and (3) patient management. Each exam question that falls within the first eight content domains is classified according to the universal task to which it is most closely aligned. If a test question within those domains does not align with one of the universal tasks, it is removed from the question pool and is not included on an exam. The universal tasks are described more fully below.

| Universal Tasks for Pediatric Emergency Medicine | |
|--|---|
| Universal Task | Description |
| 1. Core Science | Integrate the clinically supportive sciences in pediatric emergency medicine, taking into account normal and abnormal function of the body and mind in an age-specific context. |
| 2. Diagnosis | Use available information (i.e., patient history, physical examination, epidemiology) to assess acuity and formulate a differential diagnosis, select diagnostic testing, and interpret test results and response to therapies. |
| 3. Patient Management | Develop and implement a plan of care, including intervention, reevaluation, consultation, and disposition. |

DEVELOPMENT AND CLASSIFICATION OF EXAM QUESTIONS

Although the field of pediatric emergency medicine is continually evolving, the content domains and subdomains within this outline should be viewed as broad categories of knowledge that are likely to remain relatively stable over time. The detailed knowledge within the content domains and subdomains, however, is likely to change as the field continues to advance. Because exam questions may assess a PEM subspecialist's knowledge of a specific element within a content domain/subdomain, it is important to note that it is the responsibility of the test taker to ensure that his or her knowledge within each knowledge area is current and up to date.

To ensure all PEM exam questions are current and up to date, the ABP follows a rigorous question development and approval process. Each exam question is written by a board-certified subspecialist. Questions that fall within the first eight content domains are also classified to a universal task.

Once a question has been written, it is then discussed and revised, if necessary, by the ABP's Pediatric Emergency Medicine Subboard, diverse panel of practicing PEM subspecialists. During the revision process, each question is also reviewed multiple times by a medical editor to ensure accuracy and by ABP editors who standardize question style, format, and terminology; correct grammar; and eliminate ambiguity and technical flaws, such as cues to the answer.

Once the subboard has approved a question, it is included in the question pool and is made available for future exams. All approved questions in the pool are reviewed periodically for accuracy, currency and relevance.

SAMPLE QUESTION

To illustrate how exam questions are classified, consider the following sample question:

A 6-day-old full-term infant is lethargic and feeding poorly. The parents state that the infant is usually quiet and that he occasionally cries weakly but without distress. Rectal temperature is 35.6°C, heart rate 140/min, respiratory rate 26/min, and blood pressure 74/50 mm Hg. Results of physical examination are normal except for lethargy, decreased tone, and mild jaundice. Bedside blood glucose concentration is 62 mg/dL.

Which of the following would be the most appropriate additional drug therapy after complete sepsis evaluation and the administration of IV fluids, ampicillin, and cefepime?

- A. Acyclovir
- B. Dextrose
- C. Gentamicin
- D. Prostaglandin E₁

Correct answer = A. Acyclovir

The question above would be classified as shown in the table below.

| Question Classification | |
|-------------------------------|--|
| Content Domain/ Subdomain* | 1. Emergency Conditions H. Infectious disease 2. Systemic viral infection c. Herpes |
| Universal Task | 3. Patient Management |

*Note: Content subdomain 1.H.2 can be found on page 5 of this document (within the detailed content outline section).

Exam Weights

The tables below indicate the exam weights (*i.e.*, the percentage of exam questions associated with each content domain and with each universal task) for the ABP’s PEM in-training, initial certification, and maintenance of certification exams. Please note that the weights reflect the content of a *typical* exam and are approximate; actual content may vary.

| Content Domains | Exam Weight | |
|---|-------------|------|
| 1. Emergency Conditions * | 32.5% | |
| A. Allergic | | 1.5% |
| B. Cardiovascular | | 3.0% |
| C. Dental | | 0.5% |
| D. Dermatologic | | 1.5% |
| E. Endocrine | | 1.5% |
| F. Gastrointestinal | | 2.5% |
| G. Hematologic | | 1.5% |
| H. Infectious disease | | 5.0% |
| I. Metabolic/Genetic emergencies | | 1.0% |
| J. Musculoskeletal/Orthopedic | | 1.0% |
| K. Neurologic/Neurosurgical | | 2.0% |
| L. Obstetrics/Gynecologic | | 1.5% |
| M. Oncologic | | 1.5% |
| N. Ophthalmologic | | 1.0% |
| O. Otolaryngologic | | 1.0% |
| P. Pulmonary | 2.0% | |
| Q. Renal and electrolyte | 2.0% | |
| R. Rheumatologic/Immunologic | 1.0% | |
| S. Urologic | 1.5% | |
| 2. Resuscitation* | 12.5% | |
| 3. Trauma* | 17.5% | |
| 4. Toxicology* | 5.0% | |
| 5. Environmental Emergencies* | 4.0% | |
| 6. Child Abuse and Maltreatment* | 4.5% | |
| 7. Behavioral Health Conditions and Psychosocial Issues* | 5.0% | |
| 8. Special Populations* | 3.0% | |
| 9. Procedures | 6.0% | |
| 10. Disaster Preparedness | 2.0% | |
| 11. Emergency Medical Services and Transport | 2.0% | |
| 12. Emergency Department Administration and Operations | 2.0% | |
| 13. Core Knowledge in Scholarly Activities | 4.0% | |
| * Questions that fall within the first eight content domains are also classified to a universal task (see below). | 100% | |

| Universal Tasks * | Exam Weight |
|---|-------------|
| 1. Core Science | 20.0% |
| 2. Diagnosis | 40.0% |
| 3. Patient Management | 40.0% |
| * Universal task classifications and exam weights only apply to questions within content domains 1-8. | 100% |

Detailed Content Outline

Domain 1: Emergency Conditions

- *Exam questions in this domain focus on the application of the universal tasks of Core Science, Diagnosis, and Patient Management.*

- A. Allergic
 1. Anaphylaxis
 2. Angioedema
 3. Serum sickness
 4. Local allergic reactions
- B. Cardiovascular
 1. Congestive heart failure
 2. Dysrhythmias
 3. Congenital heart disease, including surgeries and post-surgical complications
 4. Cardiomyopathy
 5. Cardiac transplant
 6. Myocardial infarction
 7. Syncope
 8. Implanted cardiac devices
- C. Dental
 1. Dental caries
 2. Post-extraction complications
 3. Diseases of the salivary glands
 4. Gingival and periodontal disorders
 5. Disorders of the mandible
- D. Dermatologic
 1. Urticaria
 2. Psoriasis
 3. Stevens-Johnson syndrome/toxic epidermal necrolysis
 4. Erythema multiforme
 5. Diaper dermatitis
 6. Drug eruptions
 7. Contact dermatitis
 8. Atopic dermatitis
 9. Other skin diseases characterized by rash
- E. Endocrine
 1. Disorders of glucose homeostasis
 2. Hypothalamic and pituitary disorders
 3. Adrenal disorders
 4. Thyroid disorders
 5. Parathyroid disorders
 6. Growth and development
- F. Gastrointestinal
 1. Pyloric stenosis
 2. GI foreign body
 3. Appendicitis
 4. Intussusception
 5. Necrotizing enterocolitis
 6. Hirschsprung disease
 7. Bowel obstruction

8. Meckel's diverticulum
 9. Volvulus
 10. Jaundice and biliary tract disease
 11. Pancreatitis
 12. Inflammatory bowel disease
 13. Gastrointestinal bleed
 14. Diaphragmatic hernia
- G. Hematologic
1. Anemia
 - a. Nutritional
 - b. Membrane defects
 - c. Hemoglobinopathies
 - d. Aplastic
 2. Neutropenia and neutrophil dysfunction
 3. Platelet disorders
 4. Coagulation disorders
 5. Blood products transfusions (nontraumatic)
 6. Other
- H. Infectious disease
1. Systemic bacterial infections
 - a. Bacteremia
 - b. Meningococcemia
 - c. Sepsis
 - d. Toxin-mediated
 - e. Other bacterial infections
 2. Systemic viral infection
 - a. Infectious mononucleosis
 - b. Enterovirus
 - c. Herpes
 - d. Measles
 - e. Mumps
 - f. Rubella
 - g. Varicella
 - h. Roseola
 - i. HIV infection/AIDS
 - j. Rabies
 - k. Parvovirus
 - l. Influenza
 - m. Respiratory syncytial virus
 - n. Other viral infections
 3. Lymphadenitis
 - a. Cervical
 - b. Noncervical
 - c. Cat-scratch disease
 - d. Mycobacterial
 4. Central nervous system
 - a. Brain
 - b. Spine
 5. Head and neck
 - a. Nasopharyngitis

- b. Stomatitis/Gingivostomatitis
 - c. Pharyngitis
 - d. Otitis media
 - e. Mastoiditis
 - f. Otitis externa
 - g. Sinusitis
 - h. Peritonsillar abscess
 - i. Dental abscess
 - j. Deep neck space infections
 - k. Tracheitis
 - l. Epiglottitis
 - m. Parotitis
6. Ophthalmologic
- a. Conjunctivitis
 - b. Preseptal and orbital cellulitis
 - c. Corneal ulceration
7. Cardiac
- a. Myocarditis
 - b. Endocarditis
 - c. Pericarditis
 - d. Acute rheumatic fever
8. Respiratory
- a. Pneumonia
 - b. Bronchiolitis
 - c. Pertussis
 - d. Croup
 - e. Tuberculosis
 - f. Empyema
9. Gastrointestinal
- a. Gastroenteritis
 - b. Infectious hepatitis
 - c. Perianal/Perirectal abscess
 - d. Clostridium difficile
 - e. Cholangitis
 - f. Infectious colitis
10. Skin/Soft tissue
- a. Cellulitis
 - b. Abscess
 - c. Erysipelas
 - d. Impetigo
 - e. Necrotizing fasciitis
 - f. Omphalitis
 - g. Mastitis
 - h. Candidal infection
 - i. Staphylococcal scalded skin syndrome
 - j. Staphylococcal pustulosis
11. Orthopedic
- a. Osteomyelitis
 - b. Septic arthritis

- c. Myositis
- d. Discitis
- e. Sacroiliitis
- 12. Urologic
 - a. Cystitis
 - b. Pyelonephritis
 - c. Renal or perinephric abscess
 - d. Epididymitis
 - e. Orchitis
 - f. Balanitis
- 13. Vector-borne infections
 - a. Tickborne infections
 - b. Mosquito-borne infections
 - c. Other vector-borne or parasitic diseases
- 14. Sexually transmitted infections
 - a. Syphilis
 - b. Gonorrhea
 - c. Chlamydia
 - d. Herpes
 - e. Urethritis/Cervicitis
 - f. Trichomoniasis
 - g. Bacterial vaginosis
 - h. Human papillomavirus
 - i. Pelvic inflammatory disease
 - j. Tubo-ovarian abscess
 - k. Granuloma inguinale
- 15. International/Travel-related bacterial infections and outbreaks
- I. Metabolic/Genetic emergencies
 - 1. Hypoglycemia
 - 2. Inborn errors of metabolism
 - 3. Abnormal newborn screening
- J. Musculoskeletal/Orthopedic
 - 1. Transient synovitis
 - 2. Myositis
 - 3. Slipped capital femoral epiphysis
 - 4. Avascular necrosis
 - 5. Repetitive stress injuries
 - 6. Compartment syndrome
- K. Neurologic/Neurosurgical
 - 1. Seizures
 - 2. Headaches
 - 3. Intracranial conditions
 - 4. Neuromuscular and demyelinating conditions
 - 5. Ventricular shunt complications
 - 6. Cerebrovascular conditions
- L. Obstetrics/Gynecologic
 - 1. Pregnancy and related complications
 - 2. Ectopic pregnancy
 - 3. Pelvic pain
 - 4. Dysmenorrhea/Amenorrhea

5. Abnormal uterine bleeding
 6. Imperforate hymen
 7. Labial adhesions
 8. Ovarian torsion
 9. Pre-pubertal complaints
- M. Oncologic
1. Leukemia
 2. Non-Hodgkin lymphoma
 3. Hodgkin disease
 4. Wilms tumor
 5. Neuroblastoma
 6. Central nervous system tumors
 7. Retinoblastoma
 8. Sarcomas
 9. Histiocytosis
 10. Therapeutic complications
 11. Bone marrow transplant
- N. Ophthalmologic
1. Iritis
 2. Uveitis
 3. Hordeolum/Chalazion
 4. Glaucoma
 5. Ocular foreign bodies
 6. Acute visual disturbance
 7. Papilledema
 8. Retinal detachment
 9. Proptosis
 10. Hyphema
- O. Otolaryngologic
1. Neck masses
 2. Foreign bodies
 3. Stridor
 4. Post-operative complications
 5. Epistaxis
- P. Pulmonary
1. Bronchopulmonary dysplasia
 2. Aspiration pneumonia
 3. Pulmonary edema
 4. Pulmonary hemorrhage
 5. Pleuritis
 6. Costochondritis
 7. Cystic fibrosis
 8. Asthma
 9. Pneumothorax
 10. Pleural effusion
 11. Pulmonary foreign bodies
 12. Pulmonary embolism
 13. Congenital malformations
 14. Acute respiratory distress syndrome
 15. Acute respiratory failure

- 16. Lung transplant complications
- 17. Ventilator dependent patient
- Q. Renal and electrolyte
 - 1. Dehydration
 - 2. Electrolyte disorders
 - 3. Acid-base disorders
 - 4. Nephrotic/Nephritic syndromes
 - 5. Hypertension
 - 6. Acute kidney injury
 - 7. Renal tubular acidosis
 - 8. Hemolytic uremic syndrome
 - 9. Renal stones
 - 10. Myoglobinuria
 - 11. Renal transplant complications
 - 12. Hematuria
 - 13. Proteinuria
- R. Rheumatologic/Immunologic
 - 1. Juvenile idiopathic arthritis
 - 2. Systemic lupus erythematosus
 - 3. Kawasaki syndrome
 - 4. Anaphylactoid (Henoch-Schönlein) purpura
 - 5. Primary immunodeficiency disorders
 - 6. Other rheumatologic/immunologic conditions (eg, dermatomyositis, scleroderma, sarcoidosis)
- S. Urologic
 - 1. Penile problems
 - a. Priapism
 - b. Paraphimosis/Phimosis
 - 2. Scrotal problems
 - 3. Acute urinary retention
 - 4. Hernia

Domain 2: Resuscitation

- *Exam questions in this domain focus on the application of the universal tasks of Core Science, Diagnosis, and Patient Management.*

- A. Circulation
- B. Shock
 - 1. Cardiogenic
 - 2. Distributive
 - 3. Hypovolemic
 - 4. Obstructive
- C. Cardiopulmonary arrest
- D. Airway
- E. Respiratory failure/arrest
- F. Neurologic

- G. Neonatal resuscitation
- H. Post-resuscitation care

Domain 3: Trauma

- *Exam questions in this domain focus on the application of the universal tasks of Core Science, Diagnosis, and Patient Management.*

- A. Trauma resuscitation
- B. Multisystem trauma
- C. Chest
- D. Abdominal/Pelvic
- E. Genitourinary
- F. Neurologic
- G. Head, neck, and oral maxillofacial
- H. Musculoskeletal
- I. Ophthalmologic
- J. Wound care
- K. Burns and related injuries
- L. Injury prevention

Domain 4: Toxicology

- *Exam questions in this domain focus on the application of the universal tasks of Core Science, Diagnosis, and Patient Management.*

- A. Toxidromes/Antidotes
- B. Decontamination (non-disaster)
- C. Medications
- D. Household agents
- E. Plants
- F. Tobacco
- G. Substances of abuse including withdrawal syndromes
- H. Carbon monoxide/inhaled toxins
- I. Heavy metals
- J. Alcohols
- K. Hydrocarbons
- L. Organophosphates

Domain 5: Environmental Emergencies

- *Exam questions in this domain focus on the application of the universal tasks of Core Science, Diagnosis, and Patient Management.*

- A. Altitude and hyperbaric emergencies
- B. Animal and human bites
- C. Envenomations, bites, and stings
- D. Drowning/Submersion injury
- E. Electrical injuries/lightning
- F. Heat-related conditions
- G. Cold-related conditions

Domain 6: Child Abuse and Maltreatment

- *Exam questions in this domain focus on the application of the universal tasks of Core Science, Diagnosis, and Patient Management.*

- A. Physical abuse
- B. Neglect
- C. Sexual assault and abuse
- D. Psychological/Emotional abuse
- E. Bullying
- F. Child abuse in the medical setting
- G. Abandonment
- H. Human trafficking
- I. Legal issues and reporting

Domain 7: Behavioral Health Disorders and Psychosocial Issues

- *Exam questions in this domain focus on the application of the universal tasks of Core Science, Diagnosis, and Patient Management.*

- A. Approach to the child and family/family-centered care
- B. Psychosocial development by age group
- C. Autism spectrum disorder
- D. Depression
- E. Post-traumatic stress disorder
- F. Nonsuicidal self-injury
- G. Suicide
- H. Attention deficit-hyperactivity disorder
- I. Conduct disorder
- J. Agitated/Aggressive patient
- K. Homicidal patient
- L. Psychosis
- M. Substance abuse and chemical dependence
- N. Anxiety disorder
- O. Obsessive-compulsive disorder
- P. Eating disorders
- Q. Somatoform disorders (conversion, chronic pain)
- R. Gender dysphoria
- S. Screening
 - 1. Psychiatric safety screening
 - 2. Medical screening of the patient with psychiatric complaints
- T. Violence and children
 - 1. Post-traumatic stress
 - 2. Intimate partner violence
 - 3. Community violence
- U. Common behavioral complaints
 - 1. Colic
 - 2. Prolonged crying
 - 3. Breath holding
 - 4. Hyperventilation

Domain 8: Special Populations

- *Exam questions in this domain focus on the application of the universal tasks of Core Science, Diagnosis, and Patient Management.*

- A. Transplant patients
- B. Medically and technologically complex patients
- C. Patients with autism spectrum disorder
- D. Adult patient
 - 1. Altered mental status
 - 2. Abdominal pain
 - 3. Cardiopulmonary arrest
 - 4. Chest pain
 - 5. Neurologic deficits
 - 6. Shortness of breath
 - 7. Syncope
- E. Palliative care patients

Domain 9: Procedures

- *Exam questions in this domain assess the knowledge areas related to common procedures in pediatric emergency medicine: indications, risks and benefits, contraindications, technique, and complications.*

- A. Cardiopulmonary life support procedures
 - 1. Emergency vascular access
 - a. Intravenous access
 - b. Intraosseous access
 - c. Central venous access
 - d. Umbilical vessel access
 - 2. Dysrhythmia
 - a. Defibrillation
 - b. Cardioversion
 - 3. Advanced airway procedures
 - a. Endotracheal intubation
 - b. Approach to the difficult airway
 - c. Surgical airway
 - d. Supraglottic airway
 - 4. Pericardiocentesis
 - 5. Thoracentesis/Thoracostomy
- B. Procedural sedation/analgesia
 - 1. Local and regional anesthesia
 - 2. Alternative modes of administration (eg, nitrous)
 - 3. Sedation of the agitated/violent patient
 - 4. Sedation of patient with autism spectrum disorder or developmental delay
- C. Laceration repair
- D. Incision and drainage
- E. Lateral canthotomy
- F. Cardiac pacing
- G. High-quality CPR
- H. Hernia reduction
- I. Orthopedic procedures
- J. Foreign body removal/cerumen
- K. Nasal packing
- L. Point of care ultrasound
- M. Gastrostomy tube replacement

N. Lumbar puncture/ventricular shunt tap

Domain 10: Disaster Preparedness

- *Exam questions in this domain focus on systems-based practice in pediatric emergency medicine and ask examinees to prioritize the acute needs of patients in the context of a dynamic environment, taking into account resource availability, team and facility capacity and capabilities, and administrative and legal responsibilities.*

- Mass casualty management
- Bioterrorism
- Chemical terrorism
- Disaster triage
- Radiation exposure
- Hazardous material decontamination
- Community resource awareness (eg, strategic national stockpile, personal protective equipment, CHEMPACK, CDC/NIH resources)

Domain 11: Emergency Medical Services and Transport

- *Exam questions in this domain focus on systems-based practice in pediatric emergency medicine and ask examinees to prioritize the acute needs of patients in the context of a dynamic environment, taking into account resource availability, team and facility capacity and capabilities, and administrative and legal responsibilities.*

- EMTALA
- EMS system organization and administration
- EMS personnel
- Equipment and transportation
 - Scene transport
 - Interhospital transport considerations
- EMS for children principles – pediatric readiness, etc.
- Medical direction
- Legal considerations

Domain 12: Emergency Department Administration and Operations

- *Exam questions in this domain focus on systems-based practice in pediatric emergency medicine and ask examinees to prioritize the acute needs of patients in the context of a dynamic environment, taking into account resource availability, team and facility capacity and capabilities, and administrative and legal responsibilities.*

- Caregiver presence during resuscitation and procedures
- Documentation and reporting services
- Interpreter usage
- Risk management
- Legal/Ethical
 - Consent
 - Treatment refusal and acting against medical advice
 - Patient bill of rights
 - Regulatory requirements
 - Impaired provider
 - Electronic communication/social media
- Interpersonal and communication skills
 - De-escalation and conflict management
 - Delivery of difficult news
 - Cultural awareness

4. Handoffs/Transitions of care
5. Informed consent considerations
- G. Professionalism
 1. Error disclosure
 2. Conflict of Interest

Domain 13: Core Knowledge in Scholarly Activities

- *All of the ABP's pediatric subspecialties share the common domain of Core Knowledge in Scholarly Activities. Exam questions from this domain focus on knowledge related to research, ethics, and quality improvement.*

- A. Principles of biostatistics in research
 1. Types of variables
 2. Distribution of data
 3. Hypothesis testing
 4. Common statistical tests
 5. Measurement of association and effect
 6. Regression
 7. Diagnostic tests
 8. Systematic review and meta-analysis
- B. Principles of epidemiology and clinical research design
 1. Study design, performance, and analysis (internal validity)
 2. Generalizability (external validity)
 3. Bias and confounding
 4. Causation
 5. Incidence and prevalence
 6. Screening
 7. Cost benefit, cost effectiveness, and outcomes
 8. Measurement (eg, validity, reliability)
- C. Ethics in research
 1. Professionalism and misconduct in research
 2. Principles of research involving human subjects
 3. Principles of consent and assent
- D. Quality improvement and patient safety
 1. Project design/PDSA
 2. Data and measurement
 3. Root cause analysis
 4. Safety reporting systems