

2023
VERSION 1.0

Effective for residents who enter training on or after July 1, 2023.

Throughout this document, each reference to “children” includes neonates, infants, children, and youth.

DEFINITION

Pediatric Emergency Medicine is the branch of medicine concerned with the resuscitation and acute management of children of all ages and developmental levels, which includes triage, stabilization, diagnosis, treatment, and appropriate follow-up care.

PEDIATRIC EMERGENCY MEDICINE PRACTICE

Pediatric emergency medicine physicians provide care for infants, children, and adolescents with acute and often undifferentiated presentations. This includes a broad range of illnesses, injuries, and mental health disorders with varying levels of acuity and complexity.

The practice of Pediatric Emergency Medicine includes resuscitation, assessment, diagnosis, and medical treatment as well as the performance of diagnostic and therapeutic procedures. It also includes referral for admission and further management or for outpatient services, coordination of resources, and planning for patient disposition. Pediatric emergency medicine specialists treat the patient in a family-centered manner and incorporate preventive medicine, anticipatory guidance, and health promotion into encounters with children and their families¹. Given the nature of children’s developmental maturity and intrinsic vulnerability, pediatric emergency medicine specialists recognize and respond to legal and ethical responsibilities in addressing issues of privacy, safety, and capacity for consent or refusal of treatment.

In addition to providing direct patient care, pediatric emergency medicine physicians support other health care providers, including physicians and paramedics, by providing consultation and indirect care via telephone or telehealth services for patient assessment, management, and transport. They may serve in leadership roles in the administration of emergency medical systems and emergency departments.

Pediatric emergency medicine physicians work in dedicated pediatric emergency departments in tertiary care centres, general emergency departments, and in community hospitals where

¹ Throughout this document, references to the patient’s family are intended to include all those who are personally significant to the patient and are concerned with their care, including, according to the patient’s circumstances, family members, partners, caregivers, legal guardians, and substitute decision-makers.

they have access to the resources and health professionals required for the care of their patient population.

Pediatric emergency medicine physicians work effectively within an interprofessional health care team including nurses, paramedics, child life specialists, social workers, respiratory therapists, diagnostic technologists, and others. They collaborate with physicians within all pediatric specialties via direct or remote consultation.

ELIGIBILITY REQUIREMENTS TO BEGIN TRAINING

Royal College certification in Pediatrics or Emergency Medicine

OR

Eligibility for the Royal College examination in Pediatrics or Emergency Medicine

OR

Registration in a Royal College-accredited residency program in Pediatrics or Emergency Medicine. (See requirements for these qualifications.)

ELIGIBILITY REQUIREMENTS FOR EXAMINATION²

All candidates must be Royal College certified in their primary specialty in order to be eligible for the Royal College examination in Pediatric Emergency Medicine.

PEDIATRIC EMERGENCY MEDICINE COMPETENCIES

Medical Expert

Definition:

As *Medical Experts*, pediatric emergency medicine physicians integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional values in their provision of high-quality and safe patient-centred care. Medical Expert is the central physician Role in the CanMEDS Framework and defines the physician's clinical scope of practice.

Key and Enabling Competencies: Pediatric emergency medicine physicians are able to...

1. Practise medicine within their defined scope of practice and expertise

- 1.1. Demonstrate a commitment to high-quality care of their patients
- 1.2. Integrate the CanMEDS Intrinsic Roles into their practice of Pediatric Emergency Medicine
- 1.3. Apply knowledge of the clinical and biomedical sciences relevant to Pediatric Emergency Medicine
 - 1.3.1. Growth and development, including physical, psychological, social, and

² These eligibility requirements do not apply to Subspecialty Examination Affiliate Program (SEAP) candidates. Please contact the Royal College for information about SEAP.

sexual

- 1.3.2. Anatomy, physiology, and pathophysiology as related to clinical presentations in Pediatric Emergency Medicine
 - 1.3.2.1. Anatomy of the internal organs and the musculoskeletal and neurologic systems, including surface anatomy and sonoanatomy, to guide diagnostic and therapeutic procedures
 - 1.3.2.2. Physiology and pathophysiology as it applies to the cardiovascular, pulmonary, gastrointestinal and hepatobiliary, genitourinary, gynecologic, endocrine, neurological, musculoskeletal, hematologic, immunologic and integumentary systems, including pregnancy
 - 1.3.2.3. Pathophysiology of shock and infection
 - 1.3.3. Etiology of community and hospital-acquired infections
 - 1.3.4. Epidemiology of illness and injury
 - 1.3.4.1. Major causes of illness by age
 - 1.3.4.2. Major causes of injury by age
 - 1.3.4.3. Major causes of death by age
 - 1.3.5. Immunization
 - 1.3.5.1. Indications for immunization after injury or potential exposure to infectious agents
 - 1.3.5.2. Management of the undervaccinated child
 - 1.3.5.3. Management of vaccine hesitancy
 - 1.3.6. Principles of investigation and testing
 - 1.3.6.1. Minimization of pain and distress
 - 1.3.6.2. Diagnostic imaging modalities and their indications, contraindications, and risks
 - 1.3.6.3. Cumulative radiation dose and the application of the ALARA (as low as reasonably achievable) principle
 - 1.3.6.4. Indications for and methods of sedation and immobilization
 - 1.3.6.5. Utility, applications, and limitations of point-of-care ultrasound (POCUS)
 - 1.3.7. Non-pharmacologic approaches to the management of pain
 - 1.3.8. Pharmacology as it relates to the pharmacokinetics, pharmacodynamics, mechanism of action, routes of delivery, and adverse effects of the following:
 - 1.3.8.1. Analgesics and sedatives
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PEDIATRIC EMERGENCY MEDICINE COMPETENCIES (2023)

- 1.3.8.2. Antimicrobials
- 1.3.8.3. Cardiovascular medications
- 1.3.8.4. Endocrine medications
- 1.3.8.5. Immune-modulating therapies
- 1.3.8.6. Medications used in resuscitation
- 1.3.8.7. Neuropsychiatric medications
- 1.3.8.8. Respiratory medications
- 1.3.8.9. Alternative and complementary medications and products

- 1.3.9. Use of blood products, including indications, precautions, and dosing
 - 1.3.9.1. Massive blood transfusion protocol

- 1.3.10. Toxicology, as relevant to clinical presentations in Pediatric Emergency Medicine
 - 1.3.10.1. Drug overdoses
 - 1.3.10.2. Substances of abuse and misuse
 - 1.3.10.3. Other poisonings and ingestions
 - 1.3.10.4. Methods to prevent absorption and enhance elimination
 - 1.3.10.5. Antidotes, including indications, precautions, and dosing

- 1.3.11. Acute care, including emergencies and critical care
 - 1.3.11.1. Algorithms for neonatal resuscitation, including neonatal resuscitation program (NRP) guidelines or equivalent
 - 1.3.11.2. Algorithms for pediatric cardiopulmonary resuscitation, including pediatric advanced life support (PALS) guidelines or equivalent
 - 1.3.11.3. Assessment and management of major trauma, including advanced trauma life support (ATLS) guidelines or equivalent
 - 1.3.11.4. Invasive and non-invasive mechanical ventilation
 - 1.3.11.5. Indications for and techniques of cooling and warming procedures
 - 1.3.11.6. Indications for and techniques of providing procedural sedation
 - 1.3.11.7. Role and logistics of both inter- and intrahospital transport of acutely ill children
 - 1.3.11.8. Neurologic determination of death
 - 1.3.11.9. Principles of organ and tissue donation

- 1.3.12. Injury
 - 1.3.12.1. Injury prevention and analysis of injury events
 - 1.3.12.2. Mechanisms of injury

PEDIATRIC EMERGENCY MEDICINE COMPETENCIES (2023)

- 1.3.12.3. Environmental exposures, including biological, chemical, hyperbaric, and radiation
- 1.3.12.4. Animal bites and envenomations
- 1.3.12.5. Management of the injured patient

- 1.3.13. Clinical features, diagnostic criteria, epidemiology, natural history, pathophysiology, complications, and prognosis of illnesses in the following categories
 - 1.3.13.1. Allergic
 - 1.3.13.2. Cardiovascular
 - 1.3.13.3. Endocrinologic
 - 1.3.13.4. Gynecologic and obstetrical
 - 1.3.13.5. Gastrointestinal and hepatobiliary
 - 1.3.13.6. Hematologic
 - 1.3.13.7. Inborn errors of metabolism
 - 1.3.13.8. Infectious
 - 1.3.13.9. Neurologic
 - 1.3.13.10. Oncologic
 - 1.3.13.11. Ophthalmic
 - 1.3.13.12. Orthopedic
 - 1.3.13.13. Otolaryngologic
 - 1.3.13.14. Psychiatric and behavioural
 - 1.3.13.15. Renal and genitourinary
 - 1.3.13.16. Respiratory
 - 1.3.13.17. Rheumatologic

- 1.3.14. Social determinants of health
 - 1.3.14.1. Impact of poverty and food and housing insecurity
 - 1.3.14.2. Factors influencing access and barriers to health care
 - 1.3.14.3. Factors placing children at risk of maltreatment and neglect

- 1.3.15. Factors impacting the health of Indigenous peoples
 - 1.3.15.1. Effects of colonization on and the health care disparities of Indigenous peoples
 - 1.3.15.2. Historical agreements and legislation that govern health care
 - 1.3.15.3. Epidemiology of medical conditions affecting Indigenous children,

and recommendations for screening

1.3.15.4. Jordan's Principle

1.3.15.5. Traditional healing practices

1.3.15.6. Truth and Reconciliation Commission of Canada: Calls to Action report and implications for health care

1.3.16. Legal and regulatory issues in the care of children

1.3.16.1. Assent and consent

1.3.16.2. Capacity and medical decision-making

1.3.16.3. Involuntary hospitalization and treatment

1.3.16.4. Mandatory reporting

1.3.16.5. Privacy and confidentiality

1.3.16.6. Pronouncement of death and the role of the coroner or the medical examiner

1.3.17. Prehospital medicine

1.3.17.1. Organization and administration of emergency medical services

1.3.17.2. Paramedics, including levels of providers and scopes of practice

1.3.17.3. Out-of-hospital care, including roles of emergency response systems, dispatch, and out-of-hospital protocols

1.3.17.4. Medical direction, including direct (online) and indirect (offline) medical oversight

1.3.17.5. Medical considerations of air transport

1.3.17.6. Equipment and transportation needs specific to children

1.3.18. Disaster management

1.3.18.1. Disaster preparedness

1.3.18.2. Systems of triage

1.3.18.3. Mass casualty incident management

1.3.18.4. Decontamination procedures for chemical exposures

1.3.18.5. Incident command systems

1.4. Perform appropriately timed clinical assessments with recommendations that are presented in an organized manner

1.5. Carry out professional duties in the face of multiple competing demands

1.5.1. Triage and prioritize when dealing with single or multiple critically ill patient(s)

- 1.5.2. Work efficiently in an environment with large patient volumes and rapidly changing priorities, including simultaneous performance of multiple tasks and appropriate change in focus
- 1.6. Recognize and respond to the complexity, uncertainty, and ambiguity inherent in pediatric emergency medicine practice

2. Perform a patient-centred clinical assessment and establish a management plan

- 2.1. Prioritize issues to be addressed in a patient encounter
 - 2.1.1. Recognize and manage crisis situations and critical illness or injury
- 2.2. Elicit a history, perform a physical exam, select appropriate investigations, and interpret their results for the purpose of diagnosis and management, disease prevention, and health promotion
 - 2.2.1. Adapt the assessment to the child's age and developmental level
 - 2.2.2. Elicit the history in a timely manner
 - 2.2.3. Gather information about psychosocial and family considerations relevant to the presentation
 - 2.2.4. Use collateral sources of information to complete or substantiate clinical information
 - 2.2.5. Perform a mental health assessment to determine a patient's risk for self-harm or harm to others
 - 2.2.6. Perform clinical assessments in a manner that recognizes and minimizes pain and distress
 - 2.2.7. Perform timely and selective clinical reassessments to optimize and facilitate patient care
 - 2.2.8. Perform specialized examination techniques when indicated, including
 - 2.2.8.1. Newborn examination
 - 2.2.8.2. Eye examination
 - 2.2.8.2.1. Lid eversion
 - 2.2.8.2.2. Fluorescein instillation
 - 2.2.8.2.3. Slit lamp examination
 - 2.2.8.3. Urogenital examination
 - 2.2.8.3.1. Prepubertal genital examination
 - 2.2.8.3.2. Adolescent pelvic exam
 - 2.2.8.3.3. Collection of specimens for sexually transmitted infections

- 2.2.8.4. Assessment of child maltreatment
- 2.2.9. Select investigations with attention to diagnostic utility, safety, availability, and cost
- 2.2.10. Interpret the results of laboratory investigations
- 2.2.11. Interpret the following investigations
 - 2.2.11.1. Electrocardiograms
 - 2.2.11.2. Medical imaging, including
 - 2.2.11.2.1. Radiographs
 - 2.2.11.2.1.1. Abdominal
 - 2.2.11.2.1.2. Chest
 - 2.2.11.2.1.3. Skull
 - 2.2.11.2.1.4. Spine and extremity
 - 2.2.11.2.2. Critical findings of
 - 2.2.11.2.2.1. Abdominal/pelvic computed tomography (CT) and ultrasound
 - 2.2.11.2.2.2. Chest CT
 - 2.2.11.2.2.3. Cranial CT
 - 2.2.11.2.2.4. Imaging done as a part of a trauma protocol
 - 2.2.11.2.3. POCUS examinations
 - 2.2.12. Use sound clinical reasoning and judgment to guide diagnostic and management decisions, including in circumstances where complete clinical or diagnostic information is not immediately available
 - 2.2.13. Recognize and mitigate the risk of over-investigation and over-diagnosis
- 2.3. Establish goals of care in collaboration with children and their families, which may include slowing disease progression, treating symptoms, achieving cure, improving function, and palliation
- 2.4. Establish patient-centred management plans for:
 - 2.4.1. Resuscitation of critically ill presentations
 - 2.4.1.1. Airway emergencies
 - 2.4.1.2. Cardiopulmonary arrest
 - 2.4.1.3. Respiratory failure or arrest
 - 2.4.1.4. Anaphylaxis
 - 2.4.1.5. Shock
 - 2.4.1.6. Sepsis

PEDIATRIC EMERGENCY MEDICINE COMPETENCIES (2023)

2.4.1.7. Trauma

- 2.4.1.7.1. Blunt and penetrating injuries
- 2.4.1.7.2. Burns: chemical, electrical, and thermal

2.4.2. Acute medical and surgical presentations and findings, including

2.4.2.1. Systemic

- 2.4.2.1.1. Acute intoxication and withdrawal
- 2.4.2.1.2. Brief resolved unexplained event (BRUE)
- 2.4.2.1.3. Drowning and submersion injuries
- 2.4.2.1.4. Fever of unknown origin
- 2.4.2.1.5. Hypertension
- 2.4.2.1.6. Hypothermia and cold-related injuries
- 2.4.2.1.7. Hyperthermia and heat-related illnesses
- 2.4.2.1.8. Poor feeding, weight loss, and failure to thrive
- 2.4.2.1.9. Toxidromes

2.4.2.2. Cardiovascular

- 2.4.2.2.1. Chest pain
- 2.4.2.2.2. Congestive heart failure
- 2.4.2.2.3. Cyanosis
- 2.4.2.2.4. Dysrhythmias
- 2.4.2.2.5. Heart murmurs
- 2.4.2.2.6. Syncope

2.4.2.3. Dental and oral

- 2.4.2.3.1. Dental infections, including abscesses
- 2.4.2.3.2. Fractures, avulsions, and dislocations of primary and secondary teeth
- 2.4.2.3.3. Intraoral lacerations and soft tissue injuries
- 2.4.2.3.4. Oral lesions
- 2.4.2.3.5. Toothache

2.4.2.4. Dermatologic

- 2.4.2.4.1. Bites and infestations
- 2.4.2.4.2. Dermatitis and other rashes
- 2.4.2.4.3. Desquamating conditions
- 2.4.2.4.4. Drug reactions

2.4.2.4.5. Psoriasis

2.4.2.5. Endocrinologic

2.4.2.5.1. Adrenal insufficiency

2.4.2.5.2. Diabetic ketoacidosis

2.4.2.5.3. Hypocalcemia and hypercalcemia

2.4.2.5.4. Hypoglycemia and hyperglycemia

2.4.2.5.5. Thyroid storm

2.4.2.6. Gastrointestinal and hepatobiliary

2.4.2.6.1. Abdominal mass

2.4.2.6.2. Abdominal pain

2.4.2.6.3. Constipation

2.4.2.6.4. Diarrhea

2.4.2.6.5. Dysphagia

2.4.2.6.6. Gastrointestinal (GI) bleeding, upper and lower

2.4.2.6.7. Hepatosplenomegaly

2.4.2.6.8. Jaundice

2.4.2.6.9. Vomiting

2.4.2.7. Gynecologic

2.4.2.7.1. Abnormal vaginal bleeding

2.4.2.7.2. Dysmenorrhea

2.4.2.7.3. Pelvic pain

2.4.2.7.4. Vaginal discharge

2.4.2.8. Hematologic

2.4.2.8.1. Anemia

2.4.2.8.2. Asplenia and splenic dysfunction

2.4.2.8.3. Disorders of coagulation

2.4.2.8.4. Hepatosplenomegaly

2.4.2.8.5. Lymphadenopathy

2.4.2.8.6. Petechiae

2.4.2.8.7. Transfusion reactions

2.4.2.9. Inborn errors of metabolism

2.4.2.9.1. Acidosis

PEDIATRIC EMERGENCY MEDICINE COMPETENCIES (2023)

2.4.2.9.2. Hyperammonemia

2.4.2.9.3. Hypoglycemia

2.4.2.9.4. Dysmorphism

2.4.2.9.5. Organomegaly

2.4.2.10. Infectious diseases

2.4.2.10.1. Body fluid exposures

2.4.2.10.2. Lymphadenitis

2.4.2.10.3. Postinfectious vasculitis

2.4.2.10.4. Skin and soft tissue infections

2.4.2.11. Neurologic

2.4.2.11.1. Altered level of consciousness and coma

2.4.2.11.2. Ataxia

2.4.2.11.3. Dizziness and vertigo

2.4.2.11.4. Focal neurological deficits

2.4.2.11.5. Headache

2.4.2.11.6. Hypotonia and hypertonia

2.4.2.11.7. Paralysis

2.4.2.11.8. Seizure

2.4.2.11.9. Weakness

2.4.2.12. Obstetric

2.4.2.12.1. First trimester nausea and vomiting, including hyperemesis gravidarum

2.4.2.12.2. Pelvic pain

2.4.2.12.3. Vaginal bleeding

2.4.2.13. Ophthalmologic

2.4.2.13.1. Painful eye

2.4.2.13.2. Red eye

2.4.2.13.3. Visual disturbances

2.4.2.14. Orthopedic

2.4.2.14.1. Arthritis and arthralgia

2.4.2.14.2. Fractures and dislocations

2.4.2.14.3. Limp

2.4.2.14.4. Neck and back pain

2.4.2.15. Otolaryngologic

- 2.4.2.15.1. Epistaxis
- 2.4.2.15.2. Hearing loss
- 2.4.2.15.3. Neck mass
- 2.4.2.15.4. Otagia
- 2.4.2.15.5. Sore throat
- 2.4.2.15.6. Tonsillar hemorrhage

2.4.2.16. Psychiatric and behavioural

- 2.4.2.16.1. Aggression
- 2.4.2.16.2. Agitation
- 2.4.2.16.3. Anxiety
- 2.4.2.16.4. Crying infant
- 2.4.2.16.5. Depression
- 2.4.2.16.6. Grief and loss
- 2.4.2.16.7. Psychosis
- 2.4.2.16.8. Somatic symptoms
- 2.4.2.16.9. Suicidal ideation

2.4.2.17. Renal and genitourinary

- 2.4.2.17.1. Acidosis and alkalosis
- 2.4.2.17.2. Fluid and electrolyte abnormalities
- 2.4.2.17.3. Dysuria
- 2.4.2.17.4. Hematuria
- 2.4.2.17.5. Myoglobinuria
- 2.4.2.17.6. Urethral discharge
- 2.4.2.17.7. Urinary frequency
- 2.4.2.17.8. Urinary retention and obstruction
- 2.4.2.17.9. Scrotal pain and swelling

2.4.2.18. Respiratory

- 2.4.2.18.1. Apnea
- 2.4.2.18.2. Chest pain
- 2.4.2.18.3. Cough

- 2.4.2.18.4. Dyspnea
- 2.4.2.18.5. Hemoptysis
- 2.4.2.18.6. Inhalational injury
- 2.4.2.18.7. Stridor
- 2.4.2.18.8. Wheeze

2.4.2.19. Rheumatologic

- 2.4.2.19.1. Fever and inflammatory syndromes
- 2.4.2.19.2. Monoarthritis
- 2.4.2.19.3. Polyarthritis

2.4.2.20. Conditions presenting in special populations, including

- 2.4.2.20.1. Patients with
 - 2.4.2.20.1.1. Cancer
 - 2.4.2.20.1.2. Complex or chronic pain
 - 2.4.2.20.1.3. Medical complexity, including children dependent on technology
 - 2.4.2.20.1.4. Neurodevelopmental disorders and intellectual complexity
- 2.4.2.20.2. Patients who are
 - 2.4.2.20.2.1. At the end of life
 - 2.4.2.20.2.2. Gender diverse
 - 2.4.2.20.2.3. Immunocompromised, including transplant recipients
 - 2.4.2.20.2.4. Victims of neglect or physical or sexual abuse or assault
- 2.4.2.20.3. Recent immigrants, international adoptees, and refugees
- 2.4.2.20.4. Returning travelers

3. Plan and perform procedures and therapies for the purpose of assessment and/or management

- 3.1. Determine the most appropriate procedures or therapies
- 3.2. Obtain and document informed consent, explaining the risks and benefits of, and the rationale for, a proposed procedure or therapy
- 3.3. Prioritize procedures or therapies, taking into account clinical urgency and available resources
- 3.4. Perform procedures in a skilful and safe manner, adapting to unanticipated findings or changing clinical circumstances
 - 3.4.1. Neonatal and pediatric resuscitation

- 3.4.1.1. Oxygen delivery and suctioning
 - 3.4.1.2. Airway adjuncts and positioning techniques
 - 3.4.1.3. Bag and mask ventilation
 - 3.4.1.4. Placement of laryngeal mask airway (LMA)
 - 3.4.1.5. Rapid sequence intubation
 - 3.4.1.6. Direct and indirect laryngoscopy
 - 3.4.1.7. Management of the difficult airway
 - 3.4.1.8. Removal of supraglottic foreign body
 - 3.4.1.9. Emergency cricothyrotomy and transtracheal ventilation
 - 3.4.1.10. Initiation of mechanical ventilation
 - 3.4.1.11. Chest compressions
 - 3.4.1.12. Cardiac pacing, external
 - 3.4.1.13. Cardioversion: vagal maneuvers, chemical, and electrical
 - 3.4.1.14. Defibrillation

 - 3.4.2. Trauma life support
 - 3.4.2.1. Cervical spine immobilization
 - 3.4.2.2. Control of exsanguinating external hemorrhage
 - 3.4.2.3. Needle decompression of chest
 - 3.4.2.4. Pericardiocentesis
 - 3.4.2.5. Thoracostomy: finger and tube
 - 3.4.2.6. Application of pelvic binder

 - 3.4.3. Vascular access
 - 3.4.3.1. Peripheral
 - 3.4.3.2. Central
 - 3.4.3.3. Intraosseous
 - 3.4.3.4. Umbilical vessel catheterization
 - 3.4.3.5. Venipuncture for sampling
 - 3.4.3.6. Arterial puncture for sampling
 - 3.4.3.7. Arterial puncture for line placement

 - 3.4.4. POCUS examinations
 - 3.4.4.1. Identification of
 - 3.4.4.1.1. Abdominal or pelvic free fluid
 - 3.4.4.1.2. Cardiac standstill
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PEDIATRIC EMERGENCY MEDICINE COMPETENCIES (2023)

- 3.4.4.1.3. Hemothorax or pleural effusion
 - 3.4.4.1.4. Pericardial effusion
 - 3.4.4.1.5. Pneumothorax
 - 3.4.4.1.6. Soft tissue fluid collection or foreign body
 - 3.4.4.2. Facilitation of
 - 3.4.4.2.1. Fracture reduction
 - 3.4.4.2.2. Nerve block
 - 3.4.4.2.3. Vascular access
 - 3.4.5. Procedural sedation and analgesia
 - 3.4.5.1. Administration of local and regional anesthesia
 - 3.4.5.2. Systemic sedation and analgesia
 - 3.4.6. Dental
 - 3.4.6.1. Reimplantation of an avulsed permanent tooth
 - 3.4.7. Gastrointestinal
 - 3.4.7.1. Gastric intubation
 - 3.4.7.2. Gastrostomy tube replacement
 - 3.4.7.3. Hernia reduction
 - 3.4.7.4. Reduction of rectal prolapse
 - 3.4.8. Genitourinary
 - 3.4.8.1. Bladder catheterization
 - 3.4.8.2. Management of zipper injuries
 - 3.4.8.3. Manual testicular detorsion
 - 3.4.8.4. Reduction of paraphimosis
 - 3.4.8.5. Vaginal foreign body removal
 - 3.4.9. Head and neck
 - 3.4.9.1. Drainage and packing of hematomas: nasal septal and pinna
 - 3.4.9.2. Management of epistaxis
 - 3.4.9.3. Management of post-tonsillectomy bleeding
 - 3.4.9.4. Removal of foreign body from the nose and external auditory canal
 - 3.4.10. Injury and wound management
 - 3.4.10.1. Burn management
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3.4.10.2. Incision and drainage of abscess

3.4.10.3. Removal of

3.4.10.3.1. Subcutaneous foreign bodies

3.4.10.3.2. Fishhook

3.4.10.3.3. Hair tourniquet

3.4.10.3.4. Piercing

3.4.10.3.5. Ring

3.4.10.4. Repair of digital amputation

3.4.10.5. Repair of nailbed injury

3.4.10.6. Single and multilayer closure of lacerations

3.4.11. Neurologic

3.4.11.1. Lumbar puncture and measurement of cerebrospinal fluid pressure

3.4.12. Ophthalmologic

3.4.12.1. Contact lens removal

3.4.12.2. Eye guard application

3.4.12.3. Foreign body removal

3.4.12.4. Irrigation and decontamination

3.4.12.5. Lateral canthotomy

3.4.13. Orthopedic

3.4.13.1. Arthrocentesis of the knee

3.4.13.2. Reduction of common dislocations

3.4.13.3. Reduction of common fractures

3.4.13.4. Splinting and casting

3.4.14. Respiratory

3.4.14.1. Replacement of a tracheostomy cannula

3.4.14.2. Tracheal suctioning

4. Establish plans for ongoing care and, when appropriate, timely consultation

4.1. Implement a patient-centred care plan that supports ongoing care, follow-up on investigations, response to treatment, and further consultation

4.1.1. Determine the need for and provide vaccination or post-exposure prophylaxis

- 4.1.2. Determine the need for consultation with another physician
 - 4.1.3. Determine the need for referral to mental health or psychological services
 - 4.1.4. Determine the need for referral for social supports
 - 4.1.5. Coordinate outpatient care and follow-up for a discharged patient
 - 4.1.6. Provide follow-up for diagnostic test results that become available after a patient's discharge from the emergency department
- 5. Actively contribute, as an individual and as a member of a team providing care, to the continuous improvement of health care quality and patient safety**
- 5.1. Recognize and respond to harm from health care delivery, including patient safety incidents
 - 5.2. Adopt strategies that promote patient safety and address human and system factors
 - 5.2.1. Apply the principles of situational awareness to clinical practice
 - 5.2.2. Apply safe practices in the use of physical and chemical restraints
 - 5.2.3. Apply appropriate measures for protection of patients and health care providers to avoid exposure to or contamination from risks, including infectious agents and biologic, chemical, and radiation hazards

Communicator

Definition:

As *Communicators*, pediatric emergency medicine physicians form relationships with patients and their families that facilitate the gathering and sharing of essential information for effective health care.

Key and Enabling Competencies: Pediatric emergency medicine physicians are able to...

- 1. Establish professional therapeutic relationships with patients and their families**
 - 1.1. Communicate using a patient-centred approach that encourages patient and family trust and autonomy and is characterized by empathy, respect, and compassion
 - 1.1.1. Demonstrate an understanding of the principles and limits of patient confidentiality, including issues related to age, maturity, and capacity
 - 1.2. Optimize the physical environment for patient and family comfort, dignity, privacy, engagement, and safety
 - 1.3. Recognize when the perspectives, values, or biases of patients, patients' families, physicians, or other health care professionals may have an impact on the quality of care, and modify the approach to the patient accordingly
 - 1.4. Respond to a patient's and family's non-verbal behaviours to enhance communication

- 1.5. Manage disagreements and emotionally charged conversations
- 1.6. Adapt to the unique needs and preferences of each patient and their family and to the patient's clinical condition and circumstances
 - 1.6.1. Adapt to the age or developmental level of the patient, using appropriate communication strategies

2. Elicit and synthesize accurate and relevant information, incorporating the perspectives of patients and their families

- 2.1. Use patient-centred interviewing skills to effectively gather relevant biomedical and psychosocial information
- 2.2. Provide a clear structure for and manage the flow of an entire patient encounter
- 2.3. Seek and synthesize relevant information from other sources, including the patient's family, with the patient's assent/consent
 - 2.3.1. Seek the family's perspective with regard to concerns for a patient's health, and the impact of the child's illness on the family

3. Share health care information and plans with patients and their families

- 3.1. Share information and explanations that are clear, accurate, and timely, while assessing for patient and family understanding
 - 3.1.1. Provide information about diagnosis, investigation, management, and expected outcome
 - 3.1.2. Convey information in a clear and compassionate manner
 - 3.1.3. Provide teaching in the use of delivery systems for inhaled medications and other self-management tools
 - 3.1.4. Use developmentally appropriate language and terminology that facilitates understanding and effective decision making
- 3.2. Disclose harmful patient safety incidents to patients and their families

4. Engage patients and their families in developing plans that reflect the patient's health care needs and goals

- 4.1. Facilitate discussions with patients and their families in a way that is respectful, non-judgmental, and culturally safe
- 4.2. Assist patients and their families to identify, access, and make use of information and communication technologies to support their care and manage their health
- 4.3. Use communication skills and strategies that help patients and their families make informed decisions regarding their health

5. Document and share written and electronic information about the medical encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy

- 5.1. Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with regulatory and legal requirements
 - 5.1.1. Document evidence of abuse or neglect, including the use of diagrams and photographs as appropriate
- 5.2. Communicate effectively using a written health record, electronic medical record, or other digital technology
- 5.3. Share information with patients and others in a manner that enhances understanding and that respects patient privacy and confidentiality

Collaborator

Definition:

As *Collaborators*, pediatric emergency medicine physicians work effectively with other health care professionals to provide safe, high-quality, patient-centred care.

Key and Enabling Competencies: Pediatric emergency medicine physicians are able to...

1. Work effectively with physicians and other colleagues in the health care professions

- 1.1. Establish and maintain positive relationships with physicians and other colleagues in the health care professions to support relationship-centred collaborative care
- 1.2. Negotiate overlapping and shared responsibilities with physicians and other colleagues in the health care professions in episodic and ongoing care
 - 1.2.1. Apply knowledge of the scope of practice of other health care professionals, including:
 - 1.2.1.1. Child life specialists
 - 1.2.1.2. Community-based physicians
 - 1.2.1.3. Consultants in the emergency department
 - 1.2.1.4. Nurses
 - 1.2.1.5. Nurse practitioners
 - 1.2.1.6. Orthopedic technologists
 - 1.2.1.7. Prehospital and transport medicine provider
 - 1.2.1.8. Pharmacists
 - 1.2.1.9. Physician assistants
 - 1.2.1.10. Respiratory therapists

1.2.1.11. Social workers

1.2.1.12. Unit clerks

1.3. Engage in respectful shared decision-making with physicians and other colleagues in the health care professions

1.3.1. Optimize and expedite patient care through appropriate delegation to and involvement of other health care professionals

1.3.2. Coordinate the activities and interactions of consulting services

1.3.3. Solicit input from members of the health care team and keep the team apprised of management plans and rationale

1.3.4. Communicate effectively during crisis situations

2. Work with physicians and other colleagues in the health care professions to promote understanding, manage differences, and resolve conflicts

2.1. Show respect toward collaborators

2.2. Implement strategies to promote understanding, manage differences, and resolve conflict in a manner that supports a collaborative culture

3. Hand over the care of a patient to another health care professional to facilitate continuity of safe patient care

3.1. Determine when care should be transferred to another physician or health care professional

3.2. Demonstrate safe handover of care, using both oral and written communication, during a patient transition to a different health care professional, setting, or stage of care

3.2.1. Exchange necessary information at time of physician handover regarding patients who are expected, active, and being discharged

Leader

Definition:

As *Leaders*, pediatric emergency medicine physicians engage with others to contribute to a vision of a high-quality health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers.

Key and Enabling Competencies: Pediatric emergency medicine physicians are able to...

1. Contribute to the improvement of health care delivery in teams, organizations, and systems

1.1. Apply the science of quality improvement to systems of patient care

- 1.1.1. Apply quality improvement methodologies to identify and address gaps in patient care
 - 1.2. Contribute to a culture that promotes patient safety
 - 1.3. Analyze patient safety incidents to enhance systems of care
 - 1.4. Use health informatics to improve the quality of patient care and optimize patient safety
- 2. Engage in the stewardship of health care resources**
- 2.1. Allocate health care resources for optimal patient care
 - 2.2. Apply evidence and management processes to achieve cost-appropriate care
- 3. Demonstrate leadership in health care systems**
- 3.1. Demonstrate leadership skills to enhance health care
 - 3.1.1. Apply knowledge of leadership and management principles
 - 3.1.2. Apply knowledge of the administration of hospitals and clinical programs
 - 3.1.3. Manage emergency department flow
 - 3.1.3.1. Facilitate management of unexpected surges in patient numbers and acuity
 - 3.2. Facilitate change in health care to enhance services and outcomes
- 4. Manage career planning, finances, and health human resources in personal practice(s)**
- 4.1. Set priorities and manage time to integrate practice and personal life
 - 4.2. Manage personal professional practice(s) and career
 - 4.3. Implement processes to ensure personal practice improvement

Health Advocate

Definition:

As *Health Advocates*, pediatric emergency medicine physicians contribute their expertise and influence as they work with communities or patient populations to improve health. They work with those they serve to determine and understand needs, speak on behalf of others when required, and support the mobilization of resources to effect change.

Key and Enabling Competencies: Pediatric emergency medicine physicians are able to...

1. Respond to an individual patient's health needs by advocating with the patient and family within and beyond the clinical environment

- 1.1. Work with patients and families to address determinants of health that affect them and their access to needed health services or resources
 - 1.1.1. Assist patients and families in identifying appropriate health and social resources in the community, including support groups
 - 1.1.2. Facilitate access to health services and community resources
- 1.2. Work with patients and their families to increase opportunities to adopt healthy behaviours
- 1.3. Incorporate disease prevention, health promotion, and health surveillance into interactions with individual patients and families
 - 1.3.1. Provide counselling to patients and families regarding
 - 1.3.1.1. Injury prevention
 - 1.3.1.2. Immunization and prevention of communicable diseases
 - 1.3.1.3. Physical activity
 - 1.3.1.4. Substance use and abuse

2. Respond to the needs of the communities or populations they serve by advocating with them for system-level change in a socially accountable manner

- 2.1. Work with a community or population to identify the determinants of health that affect them
- 2.2. Improve clinical practice by applying a process of continuous quality improvement to disease prevention, health promotion, and health surveillance activities
 - 2.2.1. Advocate for resources for emerging medical technology
 - 2.2.2. Advocate for the adoption of new guidelines and acute care practice improvements
- 2.3. Contribute to a process to improve health in the community or population they serve
 - 2.3.1. Advocate to communities for the implementation of national standards for equipment and practice guidelines for acute pediatric care

Scholar

Definition:

As *Scholars*, pediatric emergency medicine physicians demonstrate a lifelong commitment to excellence in practice through continuous learning, and by teaching others, evaluating evidence, and contributing to scholarship.

Key and Enabling Competencies: Pediatric emergency medicine physicians are able to...

1. Engage in the continuous enhancement of their professional activities through ongoing learning

- 1.1. Develop, implement, monitor, and revise a personal learning plan to enhance professional practice
 - 1.1.1. Demonstrate proficiency at self-assessment and a commitment to lifelong self-directed learning and the application of new information technology and evidence-based medicine
- 1.2. Identify opportunities for learning and improvement by regularly reflecting on and assessing their performance using various internal and external data sources
- 1.3. Engage in collaborative learning to continuously improve personal practice and contribute to collective improvements in practice

2. Teach students, residents, the public, and other health care professionals

- 2.1. Recognize the influence of role modelling and the impact of the formal, informal, and hidden curriculum on learners
- 2.2. Promote a safe and respectful learning environment
- 2.3. Ensure patient safety is maintained when learners are involved
 - 2.3.1. Prioritize and balance teaching responsibilities with patient flow and care
- 2.4. Plan and deliver learning activities
- 2.5. Provide feedback to enhance learning and performance
- 2.6. Assess and evaluate learners, teachers, and programs in an educationally appropriate manner

3. Integrate best available evidence into practice

- 3.1. Recognize practice uncertainty and knowledge gaps in clinical and other professional encounters and generate focused questions that can address them
- 3.2. Identify, select, and navigate pre-appraised resources
- 3.3. Critically evaluate the integrity, reliability, and applicability of health-related research and literature
- 3.4. Integrate evidence into decision-making in their practice

4. Contribute to the creation and dissemination of knowledge and practices applicable to health

- 4.1. Demonstrate an understanding of the scientific principles of research and scholarly inquiry and the role of research evidence in health care
- 4.2. Identify ethical principles for research and incorporate them into obtaining informed consent, considering potential harms and benefits, and considering vulnerable populations
- 4.3. Contribute to the work of a research program

- 4.4. Pose questions amenable to scholarly investigation and select appropriate methods to address them
- 4.5. Summarize and communicate to professional and lay audiences, including patients and their families, the findings of relevant research and scholarly inquiry

Professional

Definition:

As *Professionals*, pediatric emergency medicine physicians are committed to the health and well-being of individual patients and society through ethical practice, high personal standards of behaviour, accountability to the profession and society, physician-led regulation, and maintenance of personal health.

Key and Enabling Competencies: Pediatric emergency medicine physicians are able to...

1. Demonstrate a commitment to patients by applying best practices and adhering to high ethical standards

- 1.1. Exhibit appropriate professional behaviours and relationships in all aspects of practice, demonstrating honesty, integrity, humility, commitment, compassion, respect, altruism, respect for diversity, and maintenance of confidentiality
- 1.2. Demonstrate a commitment to excellence in all aspects of practice
- 1.3. Recognize and respond to ethical issues encountered in practice
- 1.4. Recognize and manage conflicts of interest
- 1.5. Exhibit professional behaviours in the use of technology-enabled communication

2. Demonstrate a commitment to society by recognizing and responding to societal expectations in health care

- 2.1. Demonstrate accountability to patients, society, and the profession by responding to societal expectations of physicians
- 2.2. Demonstrate a commitment to patient safety and quality improvement

3. Demonstrate a commitment to the profession by adhering to standards and participating in physician-led regulation

- 3.1. Fulfil and adhere to professional and ethical codes, standards of practice, and laws governing practice
 - 3.1.1. Describe and incorporate into practice the professional, legal, and ethical codes relevant to pediatric emergency practice
 - 3.1.2. Apply knowledge of the legal and professional requirements relating to assent and informed consent by children and mature minors
 - 3.1.3. Apply laws governing capacity for medical decision making

- 3.1.4. Adhere to requirements for mandatory reporting
- 3.1.5. Adhere to the Canadian Medical Association (CMA) guidelines for ethical interactions with industry with respect to research and education
- 3.2. Recognize and respond to unprofessional and unethical behaviours in physicians and other colleagues in the health care professions
- 3.3. Participate in peer assessment and standard setting

4. Demonstrate a commitment to physician health and well-being to foster optimal patient care

- 4.1. Exhibit self-awareness and manage influences on personal well-being and professional performance
- 4.2. Manage personal and professional demands for a sustainable practice throughout the physician life cycle
 - 4.2.1. Recognize the importance of a balanced lifestyle for one's own health and the ability to provide optimal patient care
- 4.3. Promote a culture that recognizes, supports, and responds effectively to colleagues in need

This document is to be reviewed by the Specialty Committee in Pediatric Emergency Medicine by January 30, 2025.

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