



The Royal College of Physicians and Surgeons of Canada
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OBJECTIVES OF TRAINING IN PEDIATRICS

2008

This document applies to those who began training on or after July 1, 2008.

(Please see also the “Policies and Procedures” booklet.)

DEFINITION

Pediatrics is that branch of medicine concerned with the study and care of infants, children and youth in health and disease, their growth and development, and their opportunity to achieve full potential as adults. In the remainder of this document, reference to children also includes infants, children and youth. A Pediatrician is a specialist trained in the diagnosis and treatment of a broad range of diseases involving children based on a sound knowledge of normal growth and development and of the wide range of clinical conditions encountered in infants, children, and youth.

GOALS

Residents must demonstrate the requisite knowledge, skills, and attitudes for effective patient-centered care and service to a diverse population. In all aspects of specialist practice, the graduate must be able to address issues of age, gender, sexual orientation, culture, ethnicity and ethics in a professional manner.

Upon completion of training, a resident is expected to be a competent specialist in Pediatrics capable of assuming a consultant’s role in the specialty. The resident must acquire a working knowledge of the theoretical basis of the specialty, including its foundations in the basic medical sciences and research. Competence is to be acquired through coordinated learning experiences organized under the aegis of a university department of Pediatrics. This will have included both the necessary practical clinical experiences and formal educational activities. Through his/her training and as indicated in Section 1 of the Specialty Training Requirements, the resident will have acquired a degree of independent responsibility for clinical decisions and an understanding of the nature of the relationships between a referring physician and a consultant Pediatrician. Following completion of training and certification in Pediatrics, the resident will be prepared for independent practice capable of assuming a consultant’s role in the specialty.

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General Content of Core Training

The resident will have had an adequate experience in both the in-hospital services and the ambulatory facilities of a children's hospital or of the pediatric department of a general hospital. The resident must also have appropriate experience in community based child health services. A portion of the training must include experience and study in the comprehensive care of children with physical and psychosocial challenges. The resident will learn the skills to work collaboratively with and to provide consultation to other medical and health disciplines dealing with infants and children, especially with Psychiatry, Surgery and Obstetrics. The resident will acquire the professional attitudes to work with other health disciplines in a variety of health care service models. The resident will develop the skills of a self-directed, life-long learner. The resident will learn the skills to critically appraise both his/her practice as well as the practice of Pediatrics.

Specific Content

The resident will have been registered in an accredited Pediatric postgraduate residency program. The resident will have had experiences in core general Pediatrics and in the various Pediatric subspecialties, in both in-patient and ambulatory settings. Core Pediatric training must include experiences in acute and ongoing care Pediatrics, Pediatric Emergency Medicine, neonatology, Developmental, and behavioural Pediatrics. In order to assure an adequate breadth of training, maximum experience in any one subspecialty or discipline must be limited to six months during the three core years under Section 1. The resident will learn to set his/her own educational goals and will have had opportunities for elective experiences outside of the core training program, the essential feature being that these must be arranged with the understanding and approval of the postgraduate program director.

PEDIATRICS COMPETENCIES:

At the completion of training, the resident will have acquired the following competencies and will function effectively as a:

Medical Expert

Definition:

As *Medical Experts*, Pediatricians integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional attitudes in their provision of family-centered care. *Medical Expert* is the central physician Role in the CanMEDS framework.

Key and Enabling Competencies: Pediatricians are able to...

1. Function effectively as consultants, integrating all of the CanMEDS Roles to provide optimal, ethical and patient-centered medical care

- 1.1. Perform a consultation effectively, including the presentation of well-documented assessments and recommendations in written and/or verbal form in response to a request from another health care professional with respect to patient care and education
- 1.2. Demonstrate effective use of all CanMEDS competencies relevant to Pediatrics
- 1.3. Identify and appropriately respond to relevant ethical issues arising in patient care
- 1.4. Demonstrate ability to effectively and appropriately prioritize professional duties when faced with multiple patients and problems
- 1.5. Demonstrate compassionate and patient-centered care
- 1.6. Recognize and respond to the ethical dimensions in medical decision-making
- 1.7. Demonstrate medical expertise in situations other than patient care, such as providing expert legal testimony or advising governments, as needed

2. Establish and maintain clinical knowledge, skills and attitudes appropriate to Pediatrics

In Pediatrics, knowledge acquisition must include normal human anatomy, physiology and psychology as expressed in a biopsychosocial model of human growth and development. The Pediatrician will understand the pathophysiological and psychological processes underlying departure from normal. This will include knowledge of therapy in its broadest sense, to include life-style, nutritional, physical and drug therapies. A Pediatrician will demonstrate the ability to access and apply relevant information to clinical practice

For all clinical situations listed below, the Pediatrician must be able to evaluate, investigate, diagnose, manage and refer when appropriate:

- 2.1. Apply knowledge of the clinical, socio-behavioural, and fundamental biomedical sciences relevant to Pediatrics
 - 2.1.1. Recognize, diagnose and manage; the normal healthy state, the natural course of pediatric problems, variations in and departure from the normal
 - 2.1.2. **ACUTE CARE (Critical Care / Emergency Pediatrics)**
 - 2.1.2.1. Pathophysiology of altered consciousness, shock, respiratory failure and principles of mechanical ventilation
 - 2.1.2.2. Pathophysiology of cardiorespiratory arrest and resuscitation

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- 2.1.2.3. Principles, techniques and limitations of invasive and non-invasive cardiorespiratory monitoring
- 2.1.2.4. Fluid and electrolyte management in the acutely ill patient
- 2.1.2.5. Role of nutritional support in critical care
- 2.1.2.6. Principles, role and logistics of both inter- and intra-hospital transport of acutely ill infants and children
- 2.1.2.7. Principles of treatment to sustain function of failing organs
- 2.1.2.8. Determination of brain death and principles of organ donation
- 2.1.2.9. Management of the child with special needs and/or technology dependence

- 2.1.2.10. PROBLEMS
 - 2.1.2.10.1. Cardiorespiratory arrest
 - 2.1.2.10.2. Shock
 - 2.1.2.10.3. Respiratory failure
 - 2.1.2.10.4. Status epilepticus
 - 2.1.2.10.5. Coma
 - 2.1.2.10.6. Multiple trauma
 - 2.1.2.10.7. Acute injuries
 - 2.1.2.10.8. Head injury
 - 2.1.2.10.9. Apparent life-threatening events (ALTE)
 - 2.1.2.10.10. Renal failure
 - 2.1.2.10.11. Hepatic failure
 - 2.1.2.10.12. Metabolic crises, e.g. diabetic ketoacidosis, hyperammonemia, metabolic acidosis
 - 2.1.2.10.13. Foreign body aspiration
 - 2.1.2.10.14. Acute vomiting and dehydration
 - 2.1.2.10.15. Sepsis
 - 2.1.2.10.16. Electrolyte imbalance
 - 2.1.2.10.17. Foreign body
 - 2.1.2.10.18. Burn management
 - 2.1.2.10.19. Near drowning
 - 2.1.2.10.20. Poisonings and drug overdoses
 - 2.1.2.10.21. Lacerations

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2.1.3. ADOLESCENT HEALTH CARE

- 2.1.3.1. Normal development: physical, cognitive, psychological, sexual; emotional, behavioural, psychosocial development; peer relationships, parent-adolescent relations
- 2.1.3.2. Adolescents and society: influencing factors, heterogeneity, sub-cultures
- 2.1.3.3. Health needs and health problems
- 2.1.3.4. Normal adolescent behaviour
- 2.1.3.5. Adolescent Intervention principles
- 2.1.3.6. Laws and resources in adolescence
- 2.1.3.7. Normal adolescent gynecology
- 2.1.3.8. Transition of youth with chronic conditions to adult care

2.1.3.9. PROBLEMS

- 2.1.3.9.1. Eating disorders: anorexia nervosa, bulimia, obesity
- 2.1.3.9.2. Behavioural problems: risk taking, delinquency
- 2.1.3.9.3. Gynecological problems and disorders of menstruation
- 2.1.3.9.4. Pregnancy issues, contraception, sexually transmitted infections
- 2.1.3.9.5. Alcohol, drug, tobacco and other substance use and abuse
- 2.1.3.9.6. Chronic diseases and compliance to therapeutic regimen
- 2.1.3.9.7. Sexuality: male / female issues, sexual orientation
- 2.1.3.9.8. Fatigue
- 2.1.3.9.9. Psychosomatic conditions

2.1.4. ALLERGY AND CLINICAL IMMUNOLOGY

- 2.1.4.1. Normal host defenses and immune response
- 2.1.4.2. Variations in normal immune response with age
- 2.1.4.3. Pathophysiology of allergy, immunodeficiency states and autoimmune disease
- 2.1.4.4. Basic diagnostic laboratory techniques involving the immune system
- 2.1.4.5. Pathophysiology of allergic disorders
- 2.1.4.6. Pharmacologic and immunologic therapy of allergic disorders
- 2.1.4.7. Use of immunoglobulins as a treatment in immunodeficiency states

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- 2.1.4.8. Indications for and limitations of skin testing, RAST/serum IgE testing, serum tryptase and challenge testing
- 2.1.4.9. Understanding treatment options of patients with a primary immunodeficiency disease including antibiotics, antibody replacement therapy, bone marrow transplantation and other standard therapies

2.1.4.10. PROBLEMS

- 2.1.4.10.1. Recurrent infections and immunodeficiency syndromes including B-cell, T-cell, combined B and T cell, phagocytic and complement problems
- 2.1.4.10.2. Allergic rhinitis
- 2.1.4.10.3. Anaphylaxis
- 2.1.4.10.4. Acute and chronic urticaria/angioedema
- 2.1.4.10.5. Drug allergy
- 2.1.4.10.6. Insect stings and bites
- 2.1.4.10.7. Serum sickness
- 2.1.4.10.8. Food allergy
- 2.1.4.10.9. Vaccine allergy

2.1.5. **CARDIOVASCULAR SYSTEM**

- 2.1.5.1. Anatomy, hemodynamics and electrophysiology of the normal heart and the common congenital and acquired pediatric heart diseases
- 2.1.5.2. Fetal circulation and changes in circulation at birth
- 2.1.5.3. Indications for, limitations, benefits, costs and hazards of:
 - 2.1.5.3.1. Electrocardiogram
 - 2.1.5.3.2. Chest x-ray
 - 2.1.5.3.3. Echocardiogram and doppler
 - 2.1.5.3.4. Diagnostic and interventional cardiac catheterization and angiography
 - 2.1.5.3.5. Radioisotope studies
 - 2.1.5.3.6. Exercise ECG
 - 2.1.5.3.7. Holter monitor
 - 2.1.5.3.8. Pre and post-operative needs of the pediatric heart patient, and long-term complications
 - 2.1.5.3.9. Incidence and recurrence risk for congenital heart disease

- 2.1.5.3.10. Appropriate use of medications commonly used in the treatment of heart disease

2.1.5.4. PROBLEMS

- 2.1.5.4.1. Common forms of cyanotic and acyanotic congenital heart disease
- 2.1.5.4.2. Cardiac murmurs
- 2.1.5.4.3. Syncope
- 2.1.5.4.4. Chest pain
- 2.1.5.4.5. Endocarditis, myocarditis, and pericarditis
- 2.1.5.4.6. Kawasaki disease
- 2.1.5.4.7. Congestive heart failure
- 2.1.5.4.8. Cardiac arrhythmia
- 2.1.5.4.9. Cor pulmonale
- 2.1.5.4.10. Rheumatic fever

2.1.6. CLINICAL PHARMACOLOGY AND THERAPEUTICS

- 2.1.6.1. Mechanisms of action of drugs in relation to their ability to correct a pathophysiologic state
- 2.1.6.2. Pharmacokinetics in children
- 2.1.6.3. Placental transfer and breast milk excretion of drugs
- 2.1.6.4. Drug interactions
- 2.1.6.5. Modifications of drug dosage required in altered pathophysiologic states (e.g. renal failure, liver failure)
- 2.1.6.6. Therapeutic drug monitoring
- 2.1.6.7. Cost of commonly used drugs; choice of drugs with respect to availability of drug plans; issues related to compliance
- 2.1.6.8. The prevalence, availability and efficacy of complementary and alternative medicine and therapies

2.1.6.9. PROBLEMS

- 2.1.6.9.1. Adverse drug reactions
- 2.1.6.9.2. Acute and chronic pain
- 2.1.6.9.3. Drug toxicity
- 2.1.6.9.4. Drug withdrawal

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2.1.6.9.5. Sedation (e.g. procedural)

2.1.7. DEVELOPMENT AND BEHAVIOUR

2.1.7.1. Normal and abnormal development - gross motor, fine motor language, personal-social and behavioural

2.1.7.2. Biological and psychosocial factors affecting development and behaviour

2.1.7.3. Understanding of and interpreting psychological and education testing

2.1.7.4. PROBLEMS

2.1.7.4.1. Developmental delay and mental retardation

2.1.7.4.2. Pervasive developmental disorders/autism spectrum disorders

2.1.7.4.3. Common behavioural problems

2.1.7.4.4. Crying infant, infantile colic, sleep disorders, nightmares and night terrors

2.1.7.4.5. Learning disabilities

2.1.7.4.6. Attention deficit disorders with or without hyperactivity

2.1.7.4.7. School avoidance

2.1.8. ENDOCRINOLOGY AND METABOLISM

2.1.8.1. Normal anatomy, embryology and physiology of the endocrine glands

2.1.8.2. Normal physical growth

2.1.8.3. Physiology of normal and abnormal puberty

2.1.8.4. Disorders affecting the endocrine system, producing underactivity or overactivity

2.1.8.5. Indications and interpretation of endocrine tests

2.1.8.6. Pharmacology of commonly used drugs and hormones

2.1.8.7. Basic pathways and mechanisms of glucose homeostasis

2.1.8.8. PROBLEMS

2.1.8.8.1. Growth retardation/short stature

2.1.8.8.2. Disorders of sexual development (ambiguous genitalia / intersex)

2.1.8.8.3. Thyroid disease

2.1.8.8.4. Type 1 and type 2 diabetes mellitus, diabetic ketoacidosis

- 2.1.8.8.5. Inappropriate ADH secretion
- 2.1.8.8.6. Hypo/hypercalcemia
- 2.1.8.8.7. Hypoglycemia
- 2.1.8.8.8. Pubertal disorders / early/late sexual development
- 2.1.8.8.9. Pituitary disorders
- 2.1.8.8.10. Diabetes insipidus
- 2.1.8.8.11. Adrenal disease
- 2.1.8.8.12. Hyperlipidemias
- 2.1.8.8.13. Metabolic bone disease and osteoporosis

2.1.9. **GASTROINTESTINAL, HEPATIC AND BILIARY SYSTEMS**

- 2.1.9.1. Normal and abnormal development of the gastrointestinal tract, liver and pancreas
- 2.1.9.2. Physiology and normal/abnormal function of the gastrointestinal tract including liver, biliary tract and pancreas
- 2.1.9.3. Indications for diagnostic procedures including: endoscopy, plain abdominal x-rays, upper gastrointestinal and small bowel x-rays, contrast enema, abdominal ultrasound and CT scan, radionuclide scan
- 2.1.9.4. Indications for and interpretation of tests of gastrointestinal, pancreatic and liver function and malfunction

2.1.9.5. **PROBLEMS**

- 2.1.9.5.1. Vomiting and regurgitation
- 2.1.9.5.2. Diarrhea (acute/chronic)
- 2.1.9.5.3. Malabsorption
- 2.1.9.5.4. Intestinal bleeding
- 2.1.9.5.5. Enlargement of liver
- 2.1.9.5.6. Abdominal masses
- 2.1.9.5.7. Abdominal pain (acute/chronic)
- 2.1.9.5.8. Inflammatory bowel disease
- 2.1.9.5.9. Constipation / encopresis
- 2.1.9.5.10. Jaundice
- 2.1.9.5.11. Liver dysfunction/failure

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- 2.1.9.5.12. Dysphagia
- 2.1.9.5.13. Hepatitis
- 2.1.9.5.14. Clinical situations encountered in long-term follow-up of survivors of liver transplantation

2.1.10. GENETICS, TERATOLOGY AND METABOLICS

- 2.1.10.1. Modes and molecular basis of inheritance
- 2.1.10.2. Application of cytogenetics
- 2.1.10.3. Indications and limitations of prenatal diagnosis
- 2.1.10.4. Indications and limitations of screening programs for genetic disease
- 2.1.10.5. Principles of assessment of dysmorphology and syndrome identification
- 2.1.10.6. Application of molecular diagnosis
- 2.1.10.7. Common presentations of inborn errors of metabolism
- 2.1.10.8. Embryological basis of malformation
- 2.1.10.9. Environmental factors in fetal development

2.1.10.10. PROBLEMS

- 2.1.10.10.1. The dysmorphic child
- 2.1.10.10.2. Exposure to a possible teratogen
- 2.1.10.10.3. Approaches to initial investigations and ongoing management of common genetic syndromes (e.g. Down syndrome, Turner syndrome, Fragile-X)

2.1.11. RENAL AND GENITOURINARY SYSTEM

- 2.1.11.1. Normal and abnormal development of the genitourinary tract including the external genitalia
- 2.1.11.2. Clinical presentation of acute and chronic glomerular diseases and tubular disorders
- 2.1.11.3. Indications for, advantages and risks of investigative techniques: IVP, voiding cystourethrograms, renal scan, renal ultrasound, urodynamics, renal angiography, renin studies and renal biopsy
- 2.1.11.4. Indications and interpretation of renal function tests
- 2.1.11.5. Pathophysiology of acute and chronic renal failure
- 2.1.11.6. Indications, complications and contraindications of dialysis and renal transplantation

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- 2.1.11.7. Fluid and electrolyte requirements in normal and abnormal states
- 2.1.11.8. Normal mechanisms of acid-base balance
- 2.1.11.9. Indications for and interpretations of renal function tests

2.1.11.10. PROBLEMS

- 2.1.11.10.1. Enuresis, urinary incontinence
- 2.1.11.10.2. Disorders of the male and female external genitalia
- 2.1.11.10.3. Congenital and acquired hydronephrosis
- 2.1.11.10.4. Hematuria and nephritic syndromes
- 2.1.11.10.5. Urinary tract infection
- 2.1.11.10.6. Acute and chronic renal failure
- 2.1.11.10.7. Abdominal and pelvic mass
- 2.1.11.10.8. Congenital structural anomalies of the urinary tract
- 2.1.11.10.9. Vesico-ureteral reflux and obstructive uropathies
- 2.1.11.10.10. Circumcision
- 2.1.11.10.11. Proteinuria and nephrotic syndromes
- 2.1.11.10.12. Hypertension
- 2.1.11.10.13. Undescended testes, swollen or tender testis
- 2.1.11.10.14. Renal stones
- 2.1.11.10.15. Renal tubular disorders, Fanconi syndrome
- 2.1.11.10.16. Hypercalcemia, hypocalcemia and rickets

2.1.12. HEMATOLOGY AND ONCOLOGY

- 2.1.12.1. Development, structure and function of the formed elements of the blood and blood-forming organs including the changes in normal values with age
- 2.1.12.2. Physiology of factors responsible for hemostasis and thrombosis
- 2.1.12.3. Pathophysiology of alterations in morphology or quantity of formed elements in the blood
- 2.1.12.4. Principles underlying transfusion and hypertransfusion of blood and blood products
- 2.1.12.5. Pathophysiology of neoplasms including the acute leukemias
- 2.1.12.6. Characteristics and principles of investigation of the acute leukemias and common tumours of childhood

- 2.1.12.7. Social, familial and personal effects of childhood cancer
- 2.1.12.8. Techniques for safe administration of chemotherapy
- 2.1.12.9. Common side effects of chemotherapy and radiotherapy and their management
- 2.1.12.10. Management of the immunocompromised oncology patient
- 2.1.12.11. Late effects of cancer therapy
- 2.1.12.12. Supportive care (e.g. Central lines, G-CSF, antiemetics etc.)
- 2.1.12.13. Principles of palliative care
- 2.1.12.14. Indications for and interpretation of common hematological tests

2.1.12.15. PROBLEMS

- 2.1.12.15.1. Pallor / anemia
- 2.1.12.15.2. Bleeding and clotting disorders (congenital and acquired)
- 2.1.12.15.3. Cytopenias
- 2.1.12.15.4. Indications and complications of splenectomy
- 2.1.12.15.5. Acute and chronic complications of hemoglobinopathies and red cell disorders
- 2.1.12.15.6. Lymphadenopathy
- 2.1.12.15.7. Hepatosplenomegaly

2.1.13. **INFECTIOUS DISEASES**

- 2.1.13.1. Characteristics, epidemiology and pathogenicity of common infectious agents and conditions
- 2.1.13.2. Mechanisms of infection and host defense
- 2.1.13.3. Pharmacology of anti-microbial agents and interpretation of sensitivity tests for antibiotics
- 2.1.13.4. Control of communicable diseases, including: prevention and immunization
- 2.1.13.5. Prevention of congenital and perinatal infections
- 2.1.13.6. Diagnostic tests used to diagnose infectious diseases, including bacterial and viral cultures, microscopy, serology, PCR
- 2.1.13.7. Nosocomial infections and infection control
- 2.1.13.8. Antimicrobial resistance

2.1.13.9. PROBLEMS

- 2.1.13.9.1. Common infectious diseases (viral bacterial, fungal, parasitic, protozoan infections)
- 2.1.13.9.2. Infection in the immunocompromised host
- 2.1.13.9.3. Fever without focus
- 2.1.13.9.4. Fever of unknown origin
- 2.1.13.9.5. Perinatal / congenital infections
- 2.1.13.9.6. HIV Infection
- 2.1.13.9.7. Occult bacteremia
- 2.1.13.9.8. Life-threatening infection
- 2.1.13.9.9. Infectious issues relating to travel and immigration
- 2.1.13.9.10. Non-immunized/under immunized child

2.1.14. NEONATAL - PERINATAL MEDICINE

- 2.1.14.1. Fetal growth, development and physiology including the role of the placenta
- 2.1.14.2. Aspects of pregnancy, labour and delivery which affect the neonate
- 2.1.14.3. Effect of maternal systemic disease on the fetus and newborn
- 2.1.14.4. Demographic, medical and psychosocial factors which influence perinatal mortality and morbidity (the high-risk pregnancy)
- 2.1.14.5. Process of neonatal adaptation to extrauterine life
- 2.1.14.6. Neonatal growth, nutrition, metabolic problems, feeding problems
- 2.1.14.7. Aspects of drug therapy unique to the newborn
- 2.1.14.8. General principles of care of the newborn: skin care, temperature regulation, feeding, fluid balance and pain management
- 2.1.14.9. Clinical situations encountered in the management of the high-risk neonate
- 2.1.14.10. Newborn screening
- 2.1.14.11. Immunizations in the newborn
- 2.1.14.12. Outcomes for survival and factors influencing outcome
- 2.1.14.13. Care and follow-up of the low birth weight and high-risk baby after discharge

2.1.14.14. PROBLEMS

- 2.1.14.14.1. Respiratory distress
- 2.1.14.14.2. Cyanosis

- 2.1.14.14.3. Jaundice
- 2.1.14.14.4. Growth aberrance: IUGR, SGA/LGA
- 2.1.14.14.5. Asphyxia
- 2.1.14.14.6. Sepsis
- 2.1.14.14.7. Metabolic abnormalities including: hypoglycemia, hypo / hypercalcemia
- 2.1.14.14.8. Intraventricular hemorrhage
- 2.1.14.14.9. Hypovolemia and shock
- 2.1.14.14.10. Apnea
- 2.1.14.14.11. Prematurity
- 2.1.14.14.12. Bronchopulmonary dysplasia
- 2.1.14.14.13. Retinopathy of prematurity
- 2.1.14.14.14. Seizures
- 2.1.14.14.15. Floppy infant
- 2.1.14.14.16. Feeding difficulties / vomiting
- 2.1.14.14.17. Surgical problems of the newborn
- 2.1.14.14.18. Anemia, polycythemia, thrombocytopenia, thrombosis, bleeding disorders, white cell disorders
- 2.1.14.14.19. Drug withdrawal
- 2.1.14.14.20. Stridor

2.1.15. NEUROMUSCULAR SYSTEM:

- 2.1.15.1. Basic embryology, neuroanatomy and neurophysiology of the central nervous system, congenital malformations and common pediatric neurological problems
- 2.1.15.2. Indications for, appropriate use of, and risks/complications of the following investigations:
 - 2.1.15.2.1. Lumbar puncture
 - 2.1.15.2.2. EEG
 - 2.1.15.2.3. Evoked potentials
 - 2.1.15.2.4. Nerve conduction studies and electromyography
 - 2.1.15.2.5. Skull and spine x-rays
 - 2.1.15.2.6. Ultrasound scan of the head and spine
 - 2.1.15.2.7. CT / MRI scans
 - 2.1.15.2.8. Genetic investigations (chromosomes, DNA testing)

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2.1.15.3. Interpretation of CSF analysis

2.1.15.4. Pharmacology of drugs used in neurologic and neuromuscular problems

2.1.15.5. PROBLEMS

2.1.15.5.1. Congenital malformations of the nervous system including the skull

2.1.15.5.2. Neurocutaneous syndromes

2.1.15.5.3. Developmental regression

2.1.15.5.4. Seizures and sudden loss of consciousness

2.1.15.5.5. Headaches

2.1.15.5.6. Head trauma and sequelae

2.1.15.5.7. Cerebrovascular diseases including intracranial hemorrhage and strokes

2.1.15.5.8. Diseases of muscle (e.g. muscular dystrophies, myopathies)

2.1.15.5.9. Disorders of peripheral nerves

2.1.15.5.10. Nystagmus, dizziness and vertigo

2.1.15.5.11. Cerebral palsy

2.1.15.5.12. Breath-holding spells

2.1.15.5.13. Raised intracranial pressure

2.1.15.5.14. Tics

2.1.15.5.15. Movement disorders

2.1.15.5.16. Infections of the CNS (meningitis/encephalitis/abscess)

2.1.16. NUTRITION

2.1.16.1. Recommended nutritional requirements

2.1.16.2. Effect of disease states on nutritional requirements

2.1.16.3. Breast feeding and infant feeding

2.1.16.4. Health implications of restricted diets, fad diets, diets determined by custom or socioeconomic situation

2.1.16.5. Indications for, physiological basis of and complications of parenteral and enteral nutrition

2.1.16.6. Nutritional assessment

2.1.16.7. PROBLEMS

- 2.1.16.7.1. Failure to thrive
- 2.1.16.7.2. Obesity
- 2.1.16.7.3. Nutritional deficiencies and excesses
- 2.1.16.7.4. Feeding disorders

2.1.17. OPHTHALMOLOGY

- 2.1.17.1. Basic anatomy, embryology and physiology of the eye, ocular muscles and visual pathways
- 2.1.17.2. Etiology, classification of visual defects in children
- 2.1.17.3. Screening procedures for vision
- 2.1.17.4. Congenital abnormalities of the eye and ocular muscles
- 2.1.17.5. Acquired abnormalities of the eye
- 2.1.17.6. Ocular manifestations of systemic diseases

2.1.17.7. PROBLEMS

- 2.1.17.7.1. Congenital blindness
- 2.1.17.7.2. The red eye
- 2.1.17.7.3. Proptosis
- 2.1.17.7.4. Strabismus / amblyopia
- 2.1.17.7.5. Papilloedema
- 2.1.17.7.6. Nasolacrimal duct obstruction
- 2.1.17.7.7. Cataracts / leukocoria
- 2.1.17.7.8. Anisocoria
- 2.1.17.7.9. Ptosis
- 2.1.17.7.10. Abnormal acuity
- 2.1.17.7.11. Heterochromia of the iris
- 2.1.17.7.12. Ocular injuries
- 2.1.17.7.13. Glaucoma
- 2.1.17.7.14. Refractive errors: myopia, hyperopia, astigmatism, anisometropia
- 2.1.17.7.15. Eyelid disorders: hordeolum, chalazion, blepharitis
- 2.1.17.7.16. Conjunctival disorders: conjunctivitis, mucocutaneous diseases

- 2.1.17.7.17. Corneal disorders: ulcers, allergic reactions, keratoconjunctivitis sicca, etc.
- 2.1.17.7.18. Uveitis
- 2.1.17.7.19. Retinal disorders
- 2.1.17.7.20. Disorders of orbit: e.g. orbital cellulitis

2.1.18. MUSCULOSKELETAL SYSTEM / RHEUMATOLOGY

- 2.1.18.1. Anatomy, structure and function of bone, joint and connective tissues; normal and abnormal
- 2.1.18.2. Physiology of normal bone growth and function
- 2.1.18.3. Recognition of non-inflammatory connective tissue diseases, e.g. Marfan's syndrome, Ehlers Danlos syndrome
- 2.1.18.4. Mechanisms of immune responses in rheumatic disease
- 2.1.18.5. Indications for, and interpretation of laboratory tests on blood and synovial fluid
- 2.1.18.6. Pharmacology of common anti-inflammatory drugs, corticosteroids and immunosuppressive drugs
- 2.1.18.7. Effects of chronic rheumatic diseases on physical growth and social development
- 2.1.18.8. Common radiographic abnormalities in musculoskeletal diseases

2.1.18.9. PROBLEMS

- 2.1.18.9.1. Congenital abnormalities
- 2.1.18.9.2. Joint and limb pain
- 2.1.18.9.3. Common fractures, dislocations or injuries
- 2.1.18.9.4. Joint deformities
- 2.1.18.9.5. Septic arthritis and osteomyelitis
- 2.1.18.9.6. Common gait disorders (limp, torsional and angular deformities of lower limbs)
- 2.1.18.9.7. Scoliosis
- 2.1.18.9.8. Acute / chronic arthritis
- 2.1.18.9.9. Systemic rheumatologic diseases, e.g. systemic lupus erythematosus, juvenile idiopathic (rheumatoid) arthritis
- 2.1.18.9.10. Bone tumors

2.1.19. OTOLARYNGOLOGY

- 2.1.19.1. Embryology, anatomy and pathophysiology of the ear, nose, throat and upper airway
- 2.1.19.2. Indications and limitations of diagnostic imaging of the upper airway
- 2.1.19.3. Normal and abnormal dentition

2.1.19.4. PROBLEMS

- 2.1.19.4.1. Hearing loss / deafness
- 2.1.19.4.2. Congenital deformities of the ear
- 2.1.19.4.3. Otitis media / otitis externa
- 2.1.19.4.4. Mastoiditis and sinusitis
- 2.1.19.4.5. Rhinitis
- 2.1.19.4.6. Epistaxis
- 2.1.19.4.7. Congenital and acquired nasal obstruction, nasal polyps
- 2.1.19.4.8. Tonsillitis and complications
- 2.1.19.4.9. Cleft lip and palate
- 2.1.19.4.10. Retropharyngeal abscess
- 2.1.19.4.11. Supraglottic cellulitis / epiglottitis
- 2.1.19.4.12. Congenital and acquired stridor
- 2.1.19.4.13. Hoarseness, voice abnormalities
- 2.1.19.4.14. Dental caries, dental trauma
- 2.1.19.4.15. Congenital and acquired neck masses
- 2.1.19.4.16. Facial swelling / asymmetry
- 2.1.19.4.17. Upper airway abnormalities

2.1.20. RESPIRATORY SYSTEM

- 2.1.20.1. Anatomy and pathophysiology of lower airways, lung, diaphragm and chest
- 2.1.20.2. Control of respiration
- 2.1.20.3. Pharmacology of drugs used in respiratory diseases
- 2.1.20.4. Role of: chest X-ray, bronchoscopy, lung biopsy, lung scintigraphy, sleep studies, apnea monitors, pulmonary function studies, sweat test, and CT scan of the chest
- 2.1.20.5. Assessment and therapy of hypoxemia

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2.1.20.6. PROBLEMS

- 2.1.20.6.1. Cough, acute and chronic
- 2.1.20.6.2. Dyspnea
- 2.1.20.6.3. Mediastinal and intrathoracic masses
- 2.1.20.6.4. Asthma
- 2.1.20.6.5. Pneumothorax
- 2.1.20.6.6. Adult respiratory distress syndrome
- 2.1.20.6.7. Hemoptysis
- 2.1.20.6.8. Wheezing
- 2.1.20.6.9. Cystic fibrosis
- 2.1.20.6.10. Pleural effusions
- 2.1.20.6.11. Bronchiolitis
- 2.1.20.6.12. Bronchiectasis
- 2.1.20.6.13. Sleep apnea
- 2.1.20.6.14. Acute and chronic aspiration

2.1.21. SKIN / DERMATOLOGY

- 2.1.21.1. Embryology and anatomy of the skin and structures derived from ectodermal tissue
- 2.1.21.2. Classification and pharmacology of common topical medications
- 2.1.21.3. Recognition of skin pathology in immune disorders and auto-immune diseases
- 2.1.21.4. Indications for dermatology referral and/or for skin biopsy

2.1.21.5. PROBLEMS

- 2.1.21.5.1. Acne
- 2.1.21.5.2. Common skin infections/infestations
- 2.1.21.5.3. Common papulosquamous eruptions: e.g. psoriasis, pityriasis rosea, nummular dermatitis
- 2.1.21.5.4. Common pigmentary or vascular congenital lesions e.g. nevi, café au lait macules, hemangiomas, simple vascular malformations
- 2.1.21.5.5. Eczema and other dermatidites

- 2.1.21.5.6. Vesiculobullous diseases
- 2.1.21.5.7. Common autoimmune conditions in the skin: e.g. vitiligo, alopecia areata
- 2.1.21.5.8. Skin tumors

2.1.22. MENTAL HEALTH

- 2.1.22.1. Non-pharmacological approaches to management of mental health issues
- 2.1.22.2. Pharmacology of psychotropic and anti-depressant medications
- 2.1.22.3. Availability of and access to community-based mental health resources
- 2.1.22.4. Biological, psychosocial and socioeconomic factors affecting mental health
- 2.1.22.5. Impact on child well-being of having a parent with mental illness or substance abuse
- 2.1.22.6. Indications for hospitalization

2.1.22.7. PROBLEMS

- 2.1.22.7.1. Mood disorders / depression
- 2.1.22.7.2. Conduct disorders, oppositional defiant behaviour
- 2.1.22.7.3. Family dynamics and psychological adjustment to family stress
- 2.1.22.7.4. Personality traits
- 2.1.22.7.5. Attempted suicide or suicidal ideation
- 2.1.22.7.6. Adjustment to life stresses including chronic illness
- 2.1.22.7.7. Anxiety disorders including separation anxiety, social phobia, Post Traumatic Stress Disorder (PTSD), panic, generalized anxiety
- 2.1.22.7.8. Violent behaviour
- 2.1.22.7.9. Psychoses
- 2.1.22.7.10. Emotional abuse/bullying
- 2.1.22.7.11. Obsessive compulsive disorders

2.1.23. SURGERY

- 2.1.23.1. Principles of preoperative assessment
- 2.1.23.2. Principles of indications for appropriate surgical referrals
- 2.1.23.3. Principles of perioperative management, including: fluids, steroids, antibiotics
- 2.1.23.4. Principles of post-operative management, including pain management

2.1.23.5. PROBLEMS

- 2.1.23.5.1. Hernias
- 2.1.23.5.2. The acute abdomen
- 2.1.23.5.3. Acute scrotal pain
- 2.1.23.5.4. Bowel obstruction
- 2.1.23.5.5. Appendicitis
- 2.1.23.5.6. Abscess

2.1.24. CHILD MALTREATMENT AND NEGLECT

- 2.1.24.1. Social factors placing children at risk
- 2.1.24.2. Impact of violence on health
- 2.1.24.3. Health problems consequent to maltreatment/neglect
- 2.1.24.4. Laws relating to child protection
- 2.1.24.5. Professional requirements in managing victims of maltreatment/neglect including mandatory reporting

2.1.24.6. PROBLEMS

- 2.1.24.6.1. Shaken baby syndrome
- 2.1.24.6.2. Physical abuse
- 2.1.24.6.3. Emotional abuse and neglect
- 2.1.24.6.4. Sexual abuse
- 2.1.24.6.5. Children in care (e.g. foster care, group homes, incarceration)

3. Perform a complete and appropriate assessment of a patient

- 3.1. Identify and explore issues to be addressed in a patient encounter effectively, including the patient's and family's context and preferences
- 3.2. Elicit a history that is relevant, clear, concise and accurate to context and preferences
 - 3.2.1. Identify data and date of contact
 - 3.2.2. Identify reasons the patient was brought for or sought medical help (chief complaint)
 - 3.2.3. Identify the importance of symptoms in sufficient detail to provide a clear picture of the clinical problem(s) – history of present illness

- 3.2.4. Identify all other important information from the past history, perinatal history, developmental history, medications, allergies, review of systems, family history, and social history
- 3.3. Perform a focused, efficient, orderly physical examination, demonstrating sensitivity to the patient's needs, modified according to the patient's age, gender and problem, and record this information by regions or systems, including, but not limited to:
 - 3.3.1. Neurological examination, including fundoscopy
 - 3.3.2. Assessment of hearing
 - 3.3.3. Perform a mental status exam
- 3.4. Demonstrate effective clinical problem solving and decision making:
 - 3.4.1. Interpreting available data and integrating information to generate differential diagnoses and management plans
 - 3.4.2. Correlating, evaluating, prioritizing and synthesizing information including the relevant ethical issues
- 3.5. Implement an effective management plan in collaboration with a patient and their family by:
 - 3.5.1. Selecting medically appropriate investigations in a resource-effective and ethical manner
 - 3.5.2. Apply knowledge derived from critical appraisal of the literature appropriately
 - 3.5.3. Formulation of a problem oriented plan of management
 - 3.5.4. Generating a rational plan of diagnosis and therapies
 - 3.5.5. Interpreting and modifying a plan of management with explanation and ongoing communication with patient and parents
 - 3.5.6. Participating suitably in multi-disciplinary group discussion, initiating or facilitating as required
 - 3.5.7. Maintaining confidential information as appropriate
 - 3.5.8. Evaluating and modifying management plans by periodic reassessment of the patient's progress
 - 3.5.9. Ensuring proper recording of care and its effectiveness
 - 3.5.10. Participating in medical quality assurance activities to review quality of care issues in provision of health care

4. Use preventive and therapeutic interventions effectively

- 4.1. Demonstrating appropriate and timely application of relevant preventive and therapeutic interventions
- 4.2. Ensuring appropriate informed consent is obtained for therapies
- 4.3. Ensuring patients and families receive appropriate palliative and end-of-life care

5. Demonstrate proficient and appropriate use of procedural skills, both diagnostic and therapeutic

- 5.1. Demonstrate effective, appropriate, safe, and timely performance of the following
 - 5.1.1. Intravenous access and blood-drawing
 - 5.1.2. Umbilical venous and umbilical arterial catheterization
 - 5.1.3. Arterial puncture
 - 5.1.4. Suture of a one layer laceration, simple wound closure
 - 5.1.5. Cardiopulmonary resuscitation (neonatal and pediatric)
 - 5.1.6. Bag-mask ventilation and tracheal intubation (neonatal and pediatric)
 - 5.1.7. Lumbar puncture
 - 5.1.8. Bladder catheterization and/or suprapubic aspiration
 - 5.1.9. Gastric tube placement (oro or nasogastric)
 - 5.1.10. Intraosseous insertion as demonstrated in either a patient or model
 - 5.1.11. Chest tube placement and thoracentesis as demonstrated in either a patient or model

5.1.12. ACUTE CARE (Critical Care/Emergency Pediatrics) SKILLS

- 5.1.12.1. Recognition of critically ill infant/child
- 5.1.12.2. Airway management and cardiopulmonary resuscitation
- 5.1.12.3. Access and care for indwelling catheters
- 5.1.12.4. Perform and interpret oximetry
- 5.1.12.5. Stabilization and/or transfer of the critically ill child
- 5.1.12.6. Tracheotomy tube care, including replacement
- 5.1.12.7. Provision of procedural sedation, including choice of pharmacologic agent, appropriate monitoring and surveillance, and non-invasive airway support
- 5.1.12.8. Foreign body removal from eye/nose/upper airway
- 5.1.12.9. Assessment of the traumatized eye, including eye irrigation, and the use of dilating drops, topical fluorescein, topical anesthetics
- 5.1.12.10. Immobilization of acute limb injury including fractures
- 5.1.12.11. Cervical spine immobilization
- 5.1.12.12. Gastric lavage

5.1.13. ADOLESCENT HEALTH CARE SKILLS

- 5.1.13.1. Gynecological, genito-urinary and pelvic examination and specimen procurement
- 5.1.13.2. Breast examination
- 5.1.13.3. Assessment of adolescent using HEEADSS format (Home, Education, Eating, Activity, Drugs, Sexuality, Suicide)

5.1.14. ALLERGY AND CLINICAL IMMUNOLOGY SKILLS

- 5.1.14.1. Assessment of a patient with a potential primary immunodeficiency
- 5.1.14.2. Counseling patients/parents on avoidance measures to allergens

5.1.15. CARDIOVASCULAR SKILLS

- 5.1.15.1. Reliably interpret an electrocardiogram in all age groups
- 5.1.15.2. Interpret a chest X-ray with respect to heart size, contour and pulmonary vascularity

5.1.16. DEVELOPMENT AND BEHAVIOUR SKILLS

- 5.1.16.1. Assessment of psychomotor development
- 5.1.16.2. Counseling parents on normal growth, development and behaviour with provision of anticipatory guidance (attention to available community support and resources)

5.1.17. ENDOCRINOLOGY AND METABOLISM SKILLS

- 5.1.17.1. Bedside measurement of glucose
- 5.1.17.2. Tanner staging (sexual maturity rating) and orchidometry
- 5.1.17.3. Proper technique of height / length measurement

5.1.18. GASTROINTESTINAL, HEPATIC AND BILIARY SYSTEMS SKILLS

- 5.1.18.1. Interpretation of abdominal X-rays

5.1.19. GENETICS, TERATOLOGY AND METABOLICS SKILLS

- 5.1.19.1. Construction and interpretation of a pedigree
- 5.1.19.2. Ability to provide genetic counseling to a family / individual with a known genetic or inherited disorder and appropriate referral

- 5.1.19.3. Ability to perform a first-line work up for a suspected inborn error of metabolism (critical sample, initial investigations)
- 5.1.19.4. Initial management of a metabolic crisis

5.1.20. HEMATOLOGY AND ONCOLOGY SKILLS

- 5.1.20.1. Counseling families faced with life-threatening illness/chronic childhood illness

5.1.21. INFECTIOUS DISEASES SKILLS

- 5.1.21.1. Tuberculin skin testing - perform and interpret
- 5.1.21.2. Procurement of appropriate specimens for diagnosis of infections
- 5.1.21.3. Immunizations (storage, administration and documentation)

5.1.22. MENTAL HEALTH SKILLS

- 5.1.22.1. Use of common standard assessment tools (e.g. SNAP IV)

5.1.23. MUSCULOSKELETAL SYSTEM / RHEUMATOLOGY SKILLS

- 5.1.23.1. Interpret bone X-rays for fractures
- 5.1.23.2. Counseling regarding sport preparedness and return to play after injury

5.1.24. NEONATAL – PERINATAL MEDICINE SKILLS

- 5.1.24.1. Initial assessment of the newborn, including APGAR score and gestational age
- 5.1.24.2. Recognition, resuscitation and stabilization of the critically ill newborn
- 5.1.24.3. Management of conventional mechanical ventilation and its complications
- 5.1.24.4. Initial management of a positive newborn screen

5.1.25. NUTRITION SKILLS

- 5.1.25.1. Prescribe and manage parenteral and enteral nutrition
- 5.1.25.2. Counseling for healthy active living (healthy eating and physical activity)

5.1.26. OPHTHALMOLOGY SKILLS

- 5.1.26.1. Measure visual acuity by use of standard visual acuity charts

5.1.27. OTOLARYNGOLOGY SKILLS

- 5.1.27.1. Perform curettage under direct visualization of the ear
- 5.1.27.2. Interpretation of the tympanogram
- 5.1.27.3. Interpretation of soft tissue X-rays in acute upper airway obstruction

5.1.28. RENAL AND GENITOURINARY SYSTEM SKILLS

- 5.1.28.1. Interpret common abnormalities seen on urine microscopy

5.1.29. RESPIRATORY SYSTEM SKILLS

- 5.1.29.1. Demonstrate use of respiratory devices including spacers, peak flow meters, metered dose inhalers
- 5.1.29.2. Interpretation of pulmonary function tests
- 5.1.29.3. Interpretation of chest X-rays

5.1.30. CHILD MALTREATMENT AND NEGLECT SKILLS

- 5.1.30.1. Gather child maltreatment evidence appropriately including documentation and specimen collection

- 5.2. Ensure appropriate pain management and patient comfort for procedures
- 5.3. Ensure informed consent is obtained
- 5.4. Document and disseminate information related to procedures performed and their outcomes
- 5.5. Ensure adequate follow-up is arranged for procedures performed
- 5.6. Recognize and manage complications of procedures performed

6. Seek appropriate consultation from other health professionals, recognizing the limits of their own expertise

- 6.1. Demonstrate insight into their own limitations of expertise
- 6.2. Demonstrate effective, appropriate, and timely consultation of another health professionals as needed for optimal patient care
 - 6.2.1. Principles and applications of physical and occupational therapy for musculoskeletal diseases
- 6.3. Arrange appropriate follow-up care services for a patient and his/her family

Communicator

Definition:

As *Communicators*, Pediatricians effectively facilitate the doctor-patient relationship and the dynamic exchanges that occur before, during, and after the medical encounter.

Key and Enabling Competencies: Pediatricians are able to...

1. Develop rapport, trust, and ethical therapeutic relationships with patients and families

- 1.1. Recognize that being a good communicator is a core clinical skill for physicians, and that effective physician-patient communication can foster patient satisfaction, physician satisfaction, adherence and improved clinical outcomes
- 1.2. Establish positive therapeutic relationships with patients and their families that are characterized by understanding, trust, respect, honesty and empathy for patients and their families
- 1.3. Respect patient confidentiality, privacy and autonomy
- 1.4. Listen effectively; obtain and synthesize relevant history from patients, families and communities
- 1.5. Be aware and responsive to nonverbal cues
- 1.6. Organize and facilitate a clinical encounter effectively
- 1.7. Demonstrate an ability to support and counsel a child (and his/her family) with chronic and/or catastrophic illness and/or impending death and provide bereavement counseling

2. Accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues, and other professionals

- 2.1. Gather information about a disease, but also about a patient's beliefs, concerns, expectations and illness experience
 - 2.1.1. Demonstrate respect for individual patients and families, and for their value systems which may be different from the Pediatrician's own values
 - 2.1.2. Give close attention to the impact of such factors as age, gender, disability, ethnocultural background, social support, and emotional influences on a patient's illness
- 2.2. Seek out and synthesize relevant information from other sources, such as a patient's family, caregivers and other professionals
 - 2.2.1. Demonstrate open-mindedness to the consideration of alternative health care practices
 - 2.2.2. Demonstrate an appreciation of the parents' perspective of and concerns for a child's health and the impact of a child's illness on family relationships

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- 3. Convey relevant information and explanations accurately to patients and families, colleagues and other professionals**
 - 3.1. Deliver information to a patient and family, colleagues and other professionals in a humane manner and in such a way that it is understandable, encourages discussion and participation in decision-making
 - 3.1.1. Communicate information and provision of support in a crisis situation, e.g. sudden unexpected death

- 4. Develop a common understanding on issues, problems and plans with patients, families, and other professionals to develop a shared plan of care**
 - 4.1. Identify and explore problems to be addressed from a patient encounter effectively, including the patient's context, responses, concerns, and preferences
 - 4.2. Respect diversity and difference, including but not limited to the impact of age, gender, abilities, religion, language and cultural beliefs on decision-making and effective communication (e.g. aboriginal children, immigrant children and their families)
 - 4.3. Encourage discussion, questions, and interaction in the encounter
 - 4.4. Engage patients, families, and relevant health professionals in shared decision-making to develop a plan of care
 - 4.5. Address challenging communication issues effectively, such as obtaining informed consent, delivering bad news, and addressing anger, confusion and misunderstanding

- 5. Convey effective oral and written information about a medical encounter**
 - 5.1. Maintain clear, accurate, and appropriate records (e.g., written or electronic) of clinical encounters and plans
 - 5.2. Present verbal reports of clinical encounters and plans effectively
 - 5.3. Present medical information effectively to the public or media about a medical issue

Collaborator

Definition:

As *Collaborators*, Pediatricians effectively work within a healthcare team to achieve optimal patient care.

Key and Enabling Competencies: Pediatricians are able to...

1. Participate effectively and appropriately in an interprofessional healthcare team

- 1.1. Describe the specialist's roles and responsibilities to other professionals
- 1.2. Describe the roles and responsibilities of other professionals within the health care team
- 1.3. Recognize and respect the diversity of roles, responsibilities and competences of other professionals in relation to their own
- 1.4. Work with others to assess, plan, provide and integrate care for individual patients (or groups of patients)
- 1.5. Work with others to assess, plan, provide and review other tasks, such as research problems, educational work, program review or administrative responsibilities
- 1.6. Participate effectively in interprofessional team meetings
- 1.7. Enter into interdependent relationships with other professions for the provision of quality care
- 1.8. Describe the principles of team dynamics
- 1.9. Respect team ethics, including confidentiality, resource allocation and professionalism
- 1.10. Demonstrate leadership in a healthcare team
- 1.11. Collaborate with teachers, social workers, community leaders, child protection workers and other non-health professionals to assess, plan, provide and review health interventions

2. Work effectively with other health professionals to prevent, negotiate, and resolve interprofessional conflict

- 2.1. Demonstrate a respectful attitude towards other colleagues and members of an interprofessional team
- 2.2. Work with other professionals to prevent conflicts
- 2.3. Employ collaborative negotiation to resolve conflicts
- 2.4. Respect differences and address misunderstandings and limitations in other professionals
- 2.5. Recognize one's own differences, misunderstanding and limitations that may contribute to interprofessional tension
- 2.6. Reflect on interprofessional team function

Manager

Definition:

As *Managers*, Pediatricians are integral participants in healthcare organizations, organizing sustainable practices, making decisions about allocating resources, and contributing to the effectiveness of the healthcare system.

Key and Enabling Competencies: Pediatricians are able to...

1. Participate in activities that contribute to the effectiveness of their healthcare organizations and systems

- 1.1. Work collaboratively with others in their organizations
- 1.2. Participate in systemic quality process evaluation and improvement, including:
 - 1.2.1. Patient safety initiatives, audits, quality improvement, risk management, occurrence / incident reporting, and complaint management in a hospital and ambulatory setting
 - 1.2.2. The assessment of cost/benefit ratios of diagnostic and therapeutic interventions, cost-containment and efficacy, effectiveness and efficiency as they relate to quality assurance
- 1.3. Describe the structure and function of the healthcare system as it relates to child health, including the roles of Pediatricians.
- 1.4. Describe principles of healthcare financing, including physician remuneration, budgeting and organizational funding

2. Manage their practice and career effectively

- 2.1. Set priorities and manage time to balance patient care, practice requirements, outside activities, personal life and career goals
- 2.2. Manage a practice ethically and efficiently, including finances and human resources
- 2.3. Implement processes to ensure personal practice improvement
- 2.4. Use information technology appropriately for patient care

3. Allocate finite healthcare resources appropriately

- 3.1. Recognize the importance of just and ethical allocation of healthcare resources, balancing effectiveness, efficiency and access with optimal patient care
- 3.2. Apply evidence and management processes for cost appropriate care

4. Serve in administration and leadership roles, as appropriate

- 4.1. Chair or participate effectively in committees and meetings

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- 4.2. Lead or implement change in health care
- 4.3. Plan relevant elements of health care delivery (e.g., work schedules)

Health Advocate

Definition:

As *Health Advocates*, Pediatricians responsibly use their expertise and influence to advance child health and well-being of individual patients, families, communities, and populations.

Key and Enabling Competencies: Pediatricians are able to...

1. Respond to individual patient health needs and issues as part of patient care

- 1.1. Identify the health needs of an individual patient
- 1.2. Identify opportunities for advocacy, health promotion and disease prevention with individuals to whom they provide care

2. Respond to the health needs of the communities that they serve

- 2.1. Describe the practice communities that they serve
- 2.2. Identify opportunities for advocacy, health promotion and disease prevention in the communities that they serve, and respond appropriately
- 2.3. Appreciate the possibility of competing interests between the communities served and other populations

3. Identify the determinants of health for the populations that they serve

- 3.1. Identify the determinants of health of children; including barriers to access to care and resources
- 3.2. Identify vulnerable or marginalized populations within those served and respond appropriately (e.g. homeless, and children living in poverty)
- 3.3. Demonstrate an appreciation that the health care needs of children are distinct from those of adults

4. Promote the health of individual patients, families, communities, and populations

- 4.1. Describe an approach to implementing a change in a determinant of health of children
- 4.2. Describe how public policy impacts on child health
- 4.3. Identify points of influence in the healthcare system and its structure

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- 4.4. Describe the ethical and professional issues inherent in health advocacy, including altruism, social justice, autonomy, integrity and idealism
- 4.5. Appreciate the possibility of conflict inherent in their role as a health advocate for a patient or community with that of manager or gatekeeper
- 4.6. Describe the role of the medical profession in advocating collectively for health and patient safety

Scholar

Definition:

As *Scholars*, Pediatricians demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application and translation of medical knowledge.

Key and Enabling Competencies: Pediatricians are able to...

- 1. Maintain and enhance professional activities through ongoing learning.**
 - 1.1. Recognize the importance of self-assessment of professional competence and practice
 - 1.2. Accept responsibility for developing, implementing and monitoring a personal continuing education strategy
 - 1.3. Conduct a personal practice audit
 - 1.4. Integrate new learning into practice
 - 1.5. Evaluate the impact of any change in practice

- 2. Evaluate medical information and its sources critically, and apply this appropriately to practice decisions**
 - 2.1. Apply the principles of critical appraisal to address a clinical question
 - 2.2. Maintain a questioning and inquisitive attitude towards medical information

- 3. Facilitate the learning of patients, families, students, residents, other health professionals, the public and others, as appropriate**
 - 3.1. Identify collaboratively the learning needs and desired learning outcomes of others
 - 3.2. Select effective teaching strategies and content to facilitate others' learning
 - 3.3. Demonstrate the ability to give an effective lecture or presentation
 - 3.4. Assess and reflect on a teaching encounter
 - 3.5. Provide effective feedback

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3.6. Describe the principles of ethics with respect to teaching

4. Contribute to the development, dissemination, and translation of new knowledge and practices

4.1. Describe the principles of research, research ethics and scholarly inquiry

4.2. Pose a scholarly question

4.3. Conduct a systematic search for evidence

4.4. Select and apply appropriate methods to address the question

4.5. Disseminate the findings of a study appropriately

Professional

Definition:

As *Professionals*, Pediatricians are committed to the health and well-being of individuals and society through ethical practice, profession-led regulation, and high personal standards of behaviour.

Key and Enabling Competencies: Pediatricians are able to...

1. Demonstrate a commitment to their patients, profession, and society through ethical practice

1.1. Exhibit appropriate professional behaviors in practice, including honesty, integrity, commitment, compassion, respect and altruism

1.2. Demonstrate a commitment to delivering the highest quality care and maintenance of competence

1.3. Demonstrate a working knowledge of medical ethics, and recognize and appropriately respond to ethical issues encountered in practice

1.3.1. Demonstrate a working knowledge of the principles of medical ethics focusing on the "best interest" of the child

1.3.2. Demonstrate ability to obtain informed consent and assent

1.3.3. Demonstrate ethical decision-making processes

1.3.4. Demonstrate knowledge of the legal and ethical codes of professional behaviour and the obligations of a physician that apply to pediatrics including: e.g. notification of coroner, reporting of suspected child or sexual abuse, public health issues

1.4. Recognize the principles and limits of patient confidentiality as defined by professional practice standards and the law

1.5. Identify, declare and manage conflicts of interest including appropriate relationships with industry

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- 1.6. Demonstrate tolerance for ambiguity and uncertainty and the possibility of error in decision-making; flexibility and willingness to adjust appropriately to changing circumstances

- 2. Demonstrate a commitment to their patients, profession and society through participation in profession-led regulation**
 - 2.1. Appreciate the professional, legal and ethical codes of practice
 - 2.2. Fulfill the regulatory and legal obligations required of current practice
 - 2.3. Demonstrate accountability to professional regulatory bodies
 - 2.4. Recognize and respond to others' unprofessional behaviours in practice
 - 2.5. Participate in peer review
 - 2.6. Demonstrate a willingness to accept and participate in reviews of professional competence

- 3. Demonstrate a commitment to physician health and sustainable practice**
 - 3.1. Balance personal and professional priorities to ensure personal health and a sustainable practice
 - 3.2. Strive to heighten personal and professional awareness and insight
 - 3.3. Recognize other professionals in need and respond appropriately