YENEPOYA
Deemed to be University

REGULATIONS AND CURRICULUM GOVERNING

MD PAEDIATRICS PROGRAM

(2024-25)

Name of the Constituent Unit/Centre: Yenepoya Medical College

RABBI ZIDNI 'ILMA

YENEPOYA
Deemed to be University

Deralakatte, Mangalore, Karnataka.

NOTIFICATION FROM THE UNIVERSITY

YENEPOYA
(DEEMED TO BE UNIVERSITY)
Recognized under Sec 3(A) of the UGC Act 1956
Accredited by NAAC with 'A' Grade

NOTIFICATION – 34-ACM/2019 dtd. 20.02.2019

Sub:- Implementation of Competency Based Medical Education PG Curriculum

Ref. : Resolution of the Academic Council at its 34th Meeting held on 08.02.2019 vide Agenda 33

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The Academic Council at its 34th Meeting held on 08.02.2019 and subsequently the 45th meetings of Board of Management held on 09.02.2019 have accepted the proposal for implementation of Competency Based Medical Education (CBME) for the PG Curricula of the following programs as per the MCI Norms.

1. MD in Pathology
2. MD in General Medicine
3. MD in Anaesthesiology
4. MD in Paediatrics
5. MD in Respiratory Medicine
6. MD in Radio-diagnosis
7. MD in Anatomy
8. MD in Physiology
9. MD in Biochemistry
10. MD in Microbiology
11. MD in Pharmacology
12. MD in Forensic Medicine
13. MD in Psychiatry
14. MD in Dermatology
15. MD in Community Medicine
16. MS in General Surgery
17. MS in OBG
18. MS in Otorhinolaryngology
19. MS in Ophthalmology
20. MS in Orthopaedics

This revised curriculum shall come into effect from the academic year 2019-2020 onwards.

REGISTRAR

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MD IN PAEDIATRICS

PREAMBLE

MD COURSE in Paediatrics was started in 2005 at Yenepoya Medical College under RGUHS with the intake of 2 seats. It was increased to 4 in the year 2015 and subsequently to 6 in 2020 Under Yenepoya Deemed to be university with the mission of providing excellent education in child health. This includes newborn to adolescent care, ambulatory and in-patient care, well child/healthy and ill child, emergency care, health promotion, disease prevention and curative care, individual and family centered care. The shift towards competency-based medical education (CBME) by Medical Council of India (MCI) and continued by the National Medical Commission (NMC) focuses education to be outcome based, emphasizing abilities, balancing domains of learning and promoting a learner centered ownership of the curriculum.

The purpose of any postgraduate(PG) education is to train an individual, in this case a qualified MBBS doctor, to achieve competencies across all domains that enables the student to perform the professional role as an expert and specialist practicing a specialty in the community (Newborn to adolescent care; ambulatory and in-patient care; Well child/Healthy and Ill child; health promotion, disease prevention and curative care; individual and family centered care; emergency care, Intensive and routine Care).The shift towards competency-based medical education by Medical Council of India and continued by the National Medical Commission (NMC) focuses education to be outcome based, emphasizing abilities, balancing domains of learning and promoting a learner centered ownership of the curriculum.

The practice of medicine has and will continue to change. Existing changes in the environment and practice have included an explosion of information, stress on knowledge at the expense of skills/attitudes/critical thinking, increased access of information and health delivery systems by lay public, development and access to sub-specialties, technological and IT advances, costs of management (diagnostic and therapeutic), changes in disease trends (non-communicable diseases, behavioral/developmental disorders, malignancies, immunology, etc.),medico-legal litigations, emphasis on quality standards, improved patient safety, violence/anger against health personnel and the emergence of professional- ethical dilemmas to name a few.

The NMC's competency based education is organized using a framework of competencies (predefined abilities) that forms the backbone of the curriculum as defined outcomes. These competencies are defined as observable abilities of a health professional, integrating multiple components across all domains, cognitive, psychomotor skills, and affective. Identified competencies are to be measured and assessed to ensure their acquisition which in turn determines competence. Defined competencies in each domain facilitates education progressing from being a novice towards mastery with formative assessments (feedback) vital for success. Every domain will have weightage and the phenomenon of allowing the ability in one should not be allowed to compensate the lack of ability in another.

These changes are reflected in the review of Core Competencies keeping them mostly aligned with CBME Undergraduate efforts. Each competency will require Sub-competencies/milestones enabling both student and teacher monitor progress that is transparent making both accountable. Specific Learning Objectives that will be necessary to achieve (and assess) outcomes are certainly also required to complete the process. This document has been prepared by subject-content specialists of NMC. The Expert Group of the NMC had attempted to render uniformity without compromise to the purpose and content of the document. Compromise in purity of syntax has been made in order to preserve the purpose and content. This has necessitated retention of "domains of learning" under the heading "competencies.

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SUBJECT SPECIFIC OBJECTIVES

Goal

The goal of the MD Paediatrics post-graduate course on successful completion, is to mould the individual into a qualified Pediatrician who is a specialist doctor with the ability (competence) to assess the state of health; promote health; and diagnose as well as manage disease (acute or chronic, emergency or routine) in children of all ages from newborn to the adolescent.

- To train the individual into a qualified Pediatrician who is a specialist doctor with the ability (competence) to assess the state of health; promote health; and diagnose as well as manage disease (acute or chronic, emergency or routine) in children of all ages from newborn to the adolescent.
- To deal with medical and surgical conditions of varied degrees of complexities providing a spectrum of care from prevention, promotion, resuscitation, emergency care, acute care, chronic care and procedures (diagnostic and therapeutic) including providing palliative care.
- To incorporate the dynamic requirement of changes in growth and development into screening, assessments, diagnostic and therapeutic decisions.
- To play an important part in the health of the family and community especially through education and support of prevention of disease and health promotion.
- To provide consultative services to many other physicians across the specialties including Emergency, Burns, Plastic Surgery, Anesthesiologist, Surgeons, Infectious Disease, Community and Family Medicine.

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SUBJECT SPECIFIC OBJECTIVES

The objectives of the postgraduate course (MD) in Paediatrics are to produce a competent pediatrician who:

- Acquires competencies relevant to all aspects of Paediatrics (newborn to adolescent) that are essential to function as a clinical expert in providing newborn and pediatric health services for the community at all levels.
- Recognizes the holistic health needs of healthy neonates, infants, children, and adolescents
- Performs responsibilities of the provision of clinical care in keeping with principles of the National Health Policy.
- Performs responsibilities in a professional and ethical manner.
- Acquires skills in effectively communicating not only with the health team but with the child, family, and the community
- Is actively involved in keeping oneself up to date with scientific advances in Paediatrics and Medico legal aspects of practice.
- Is oriented to principles of research methodology enabling critical appreciation of published scientific evidence and contributing through scholarship
- Acquires skills to enable education of all stakeholders including health team members
- Acquires skills and understanding of dealing with health team members enabling optimizing system-based practice.

SUBJECT SPECIFIC COMPETENCIES

Towards achieving suitable outcomes certain Competencies are essential to be achieved, assessed that will enable the qualified professional to perform the role of a Paediatric Specialist.

Aligned with the NMC's existing Undergraduate CBME, the following are refined and identified as themes or roles mandatory to perform the responsibility as a Pediatric Specialist in the community after acquiring an MD Paediatric post-graduation:

1. Clinical Expert
2. Communicator
3. Professional
4. Scholar
5. Team Member

Core Competencies

(The term 'children' is hereby used to include all age groups from birth to 18 years - newborn, neonates, infants, toddlers, children and adolescents)

To perform each of these above roles as a Paediatrician, every role determines competencies which in turn requires Specific Learning Objectives covering all the domains of learning.

By the end of the MD Paediatric course, the postgraduate student should be able to:

1. Clinical Expert

1.1. Appreciate and recognize maternal and child health needs in the context of the health priority of the country at all levels ie. Individual, Community, Local, Regional, and National.

1.2. Apply an understanding of the determinants of child health at individual, community, and population levels in practice of disease prevention, health promotion and clinical care of all children.

1.3. Understand the existing inequities in accessibility to child friendly health, economics of child health and existing status of child health across gender, communities, region, and nation (eg. NHFS survey).

1.4. Participate in population/community efforts towards prevention, promotion, and disease control relevant and with implications for child health (ie. National Health Programs).

1.5. Appreciate and recognize the importance of nurturing care for the early growth and development as the very foundation of Paediatrics and help each child realize her/his optimal growth and development potential.

1.6. Actively support the optimization of quality of growth, development, and holistic health of children in care through education enhancing the promotive, preventive, and curative measures.

1.7. Provide continuum of care and rehabilitation for children afflicted by chronic disease.

1.8. Scientific Knowledge and Evidence

1.8.1. Apply an understanding of scientific basis, concepts, principles, and advances as the basis of health and disease in the screening, diagnosis, and management of all children including growth and development.

1.9. Clinical History/Examination

1.9.1. Demonstrate appropriate proficiency in basic clinical skills appropriate for children, ie. History, Physical Examination and Assessments of Growth/ Development/ Behavior, in arriving at the most likely clinical differential; in identifying precipitating or predisposing factors; prioritizing high risk versus low-risk conditions; and, those in need of emergency versus routine care.

1.9.2. Organize and analyze an authentic history and relevant examination towards a valid clinical assessment of health of all children including growth, development, and behavioral assessments.

1.10. Investigations

1.10.1. Order rational Investigations and interpret results keeping in mind cost effectiveness and purpose in child health (ie., confirming diagnosis that impacts management decisions).

1.11. Procedures/Interventions

1.11.1 Order, perform with safety and interpret results of procedures/ interventions that are cost-effective for diagnostic and therapeutic purposes in child health.

1.12. Critical Thinking

1.12.1. Demonstrate a logical clinical approach to diagnose children in health and disease in all settings.

1.12.2. Manage using appropriate resources all children in health and disease in settings not less than secondary level facilities

1.12.3. Demonstrate clinical reasoning at every step from gathering, organization, prioritization, analysis and creating logical diagnostic hypothesis from clinical data relevant to childhood (history to examination to investigations)

1.12.4. Formulate rational, judicious, and cost-effective plans (Investigation, Therapeutic and Counseling/Education plans) for all children in health and disease (acute and chronic) taking into consideration individual/ family circumstances, interpersonal dynamics, socioeconomic status, vulnerabilities, epidemiology, and population health factors.

1.12.5. Choose investigations and prescribes medications/interventions that are rational and cost-effective balancing benefits and costs in child health in the context of family status.

1.12.6. Critically appreciate scientific literature especially relevant to children under their care.

1.13. Responsiveness

1.13.1. Rapidly assess/screen, recognize and manage critically ill sick children prioritized for immediate attention.

1.13.2. Demonstrate sensitivity and appreciate the emotional and behavioral characteristics and needs of children while dealing with them

1.14. Quality of Care

1.14.1. Demonstrate practices that maximize child safety

1.14.2. Optimize safe working practices in child health delivery settings

1.14.3. Participate in incident reporting of adverse events and errors enabling quality improvement of child health

1.14.4. Participate in continuous Child Health Care related Quality Improvement measures especially patient related audits, recognition of gaps and implementation of interventions to improve quality

1.15. Advocacy

1.15.1. Responding to a Child's health needs by advocating for them

1.16. Documentation

1.16.1. Maintain Child health records of relevant demographic details clinical details, progress, interpretations, educational, monitoring and management decisions accurately and neatly organized

1.16.2. Provide relevant concise summaries and certification in completeness to authorized legal guardians of children

1.16.3. Maintain childhood morbidity and mortality data for audit purposes.

2. Communicator

2.1. Effective Communication

2.1.1. Demonstrate all aspects of effective and empathetic communication during most encounters with children and parents/guardians (listening skills, culturally appropriate verbal and non-verbal cues, simple understandable language, allow questions, clarify answers and concise written communications for prescriptions and patient education)

2.1.2. Demonstrate mutually respectful communications with children/parents/guardians (verbal, telephonic, electronic and written) that is collaborative and effective between health system colleagues of all levels.

2.2. Effective Counseling

2.2.1. Provide professional assistance and guidance in assisting children/parents/ authorized legal guardians determine their autonomous decisions regarding their own health (especially related Diagnostic Interventions and Therapeutic options).

3. Professional

3.1. Responsibility

3.1.1. Demonstrate responsibility for all aspects of the conduct of child care, academic tasks and research in children undertaken.

3.1.2. Demonstrate social accountability consistent with community and professional expectations through active participation in child health relevant Community Outreach programs

3.1.3. Demonstrate an understanding of one's own limits and seeks assistance appropriately in dealing with children in health and disease.

3.2. Integrity

3.2.1. Demonstrate commitment with honesty for consistent and uncompromising adherence to moral and ethical principles and values in protecting child rights and wellbeing during care, academics, and research.

3.3. Compassion and empathy

3.3.1. Demonstrate the ability to understand and share the feelings of children and

families while dealing with them as care providers.

3.3.2. Demonstrate the ability to understand and share the feelings of health team members while working with them for the good of children.

3.4. Stigma and Discrimination

3.4.1. Demonstrate ability to comprehend the differences in values and beliefs while respectfully continuing child health care without discrimination

3.5. Ethical principles

3.5.1. Recognize ethical conflicts specific for child health between principles of ethics and justifies options/decisions while discussing within health care team discussions.

3.5.2. Demonstrate respect for confidentiality in issues related to child health.

3.5.3. Demonstrate ability to honor the doctor-child/parent/legal guardian relationship in all dealings with respect ensuring due care especially avoiding all inappropriate behavior and activities that lead to conflicts of interest.

3.5.4. Demonstrate mutual respect for all members on the child health team and behaves equitably and collaboratively while dealing with them.

3.5.5. Demonstrate prioritization of child's welfare and community benefits over self when appropriate.

3.6. Medicolegal Law and Code of Ethics

3.6.1. Practice within the NMC's standards as prescribed by the Code of Ethics especially in dealings with children.

3.6.2. Practice within the Law of the land fulfilling legal requirements during the provision of care especially relevant to children.

4. Scholar

4.1. Research

4.1.1. Refer to evidence-based guidelines in the decision-making process for child care justifying limitations.

4.1.2. Understand research methodology and the creation of a research studies for child health.

4.1.3. Demonstrate the ability to critically appreciate the quality and implications of scientific literature justifying its application in the delivery of child health care.

4.1.4. Demonstrate an ability to identify pertinent research questions relevant to child health through active participation and involvement in research.

4.2. Academics

4.2.1. Demonstrate features of active adult learning through enthusiasm and displaying a positive attitude in the educational process while participating in educational activities to build child health care capacities (Intra- and inter-institutional).

4.2.2. Use appropriate educational techniques to promote health education amongst children/parents/legal guardians/community

4.2.3. Use appropriate educational techniques to facilitate learning of other child health care team members including undergraduates, nurses, paraclinical staff and peers

4.2.4. Maintain competency by keeping up to date with child health guidelines through continued medical education with scientific knowledge and skills to enable quality practice

4.3. Application

4.3.1. Apply child health expertise in an area of study that is published in academic journals

4.3.2. Apply child health expertise while participating in health education and community efforts

5. Team Member

5.1. Teams

5.1.1. Demonstrate an understanding of the roles and competencies of other health care providers dealing with child health.

5.1.2. Demonstrate the ability to engage and collaborate with all child health care team members keeping the patient at the center of all such collaboration.

5.1.3. Recognize and discuss in a non-judgmental way the roles of informal stakeholders as extended teams especially in child care planning (especially mature adolescent, extended family, alternative medicine practitioners, support networks, etc.)

5.1.4. Demonstrate knowledge of health care financing, implications for management and its application in assisting patient to access the best possible care through extended team networking while dealing with child health.

5.1.5. Maintain personal health and wellbeing not only of self but of team members.

5.2. Leaders

5.2.1. Demonstrate leadership and management skills enabling effective working as a child health team

5.2.2. Lead, manage, and participate as a member of an effective and efficient child health care team while collaborating respectfully either as leader or member.

5.2.3. Facilitate child health team capacity building of competencies by leading through conduct of effective education sessions for members of the health team learning.

5.2.4. Manage time and human resources efficiently and effectively to deliver optimal child health care.

SYLLABUS

Syllabus gives an outline and summary of topics to be covered in the MD Paediatric Course. In Competency Based Education, outcomes are required to be defined, taught, learnt, and assessed that determines competence at the end of the course. Defined Outcomes should focus on what is expected practically in the "real world" by the professional performing roles of the expert physician. This syllabus is focused on all age group of children from neonates to toddlers to children to adolescents as per existing practice. The syllabus thus stresses on "real world presentation of symptoms and signs" and is categorized under the following:

A. Cognitive Domain
    a. Basic Sciences
    b. Approaches/Management of common symptoms/signs inclusive of analysis, interpretation, and application of investigations
    c. Specific Topics classified as per traditional systems
B. Psychomotor Domain
C. Affective Domain
D. Pedagogic and Research Skills

A) Predominant in Cognitive (Knowledge) Domain

a. Basic Sciences

- *Should be able to justify and apply in the practice of Paediatrics, an understanding of the fundamentals of basic sciences as listed below:*

1. Applied Anatomy

1.1. Embryogenesis of all organ systems

1.2. Central Nervous System

1.2.1. Structures, Functions, Clinical considerations

1.2.1.1. Cerebral Cortex

1.2.1.2. Corticospinal tracts

1.2.1.3. Extrapyramidal tracts

1.2.1.4. Cerebellar connections

1.2.1.5. Sensory tracts

1.2.1.6. Ventricles

1.3. Spinal Cord, Peripheral Nerves

1.3.1. Structures, Functions, Clinical considerations

1.3.1.1. Lower Motor Neuron

1.4. Bladder and Bowel control

1.5. Vascular supply – Principal arteries and veins

1.6. Extremities, Abdomen, Thorax, Head and Neck

1.7. Fetal circulation

2. Physiological basis and Pathophysiology in Health and Disease

2.1. Physical Growth

2.2. Temperature regulation

2.3. Acid Base Balance

2.4. Fluid Balance

2.5. Hematopoiesis

2.6. Hemostasis

2.7. Electrolyte balance

2.8. Bone mineralization: Calcium-Phosphate balance

2.9. Puberty

2.10. Renal function

2.11. Hepatic function

2.11.1. Bilirubin

2.11.2. Drug metabolism

2.12. Respiratory function

2.13. Cardiac function

2.14. Gastrointestinal

2.15. Endocrine functions

2.16. Developmental Milestones

2.17. Adolescence

2.18. Placenta functions

2.19. Fetal to Infant Transitions (Cardio-respiratory)

2.20. Nutrition

2.21. Allergy

3. Biochemical basis of health and disease

3.1. Cell biology

3.1.1. Cell cycle

3.1.2. Cell signaling

3.2. CHO metabolism

3.3. Lipid metabolism

3.4. Protein metabolism

3.5. TCA Cycle

3.6. Hemoglobin

3.7. Clinical Chemistry

3.7.1. Vitamins

3.7.2. Minerals

3.8. Plasma Proteins

3.9. Coagulation Pathway

4. Genetics and Molecular Medicine

4.1. Human Genome

4.2. Nucleic acids

4.2.1. Protein synthesis

4.3. Recombinant DNA Technology

4.3.1. Basic techniques

4.3.2. Applications

4.4. Chromosomal abnormalities

4.4.1. Pedigree charting

4.5. Prenatal/Postnatal diagnosis

4.6. Immunogenetics

4.6.1. HLA

5. Clinical Microbiology

5.1. Virology

5.1.1. Classifications

5.1.2. Diagnostics

5.1.3. Therapeutics

5.1.4. Resistance

5.2. Bacteriology

5.2.1. Classification

5.2.2. Endo/Exotoxins

5.2.3. Diagnostics

5.2.4. Therapeutics

5.2.5. Resistance

5.2.6. Antibiotic Stewardship

5.3. Mycology

5.3.1. Classification

5.3.2. Diagnostics

5.3.3. Therapeutics

5.3.4. Resistance

5.4. Parasitology (Protozoology and Helminthology)

5.4.1. Classification

5.4.2. Diagnostics

5.4.3. Therapeutics

5.4.4. Resistance

5.5. Waste disposal, sterilization, disinfection

5.5.1. Infection Control

6. Immunology

6.1. Immune response system

6.1.1. Innate, Adaptive

6.1.2. Cellular

6.1.3. Antibodies

6.1.4. Cytokines

6.1.5. Clinical considerations

6.2. Immunoglobulins

6.2.1. Types

6.2.2. Clinical considerations

6.3. Complement

6.3.1. Components

6.3.2. Pathways

6.3.3. Deficiencies

6.3.4. Clinical considerations

6.4. Hypersensitivity reactions

6.5. Blood group Immunology

6.5.1. ABO

6.5.2. Rh

6.5.3. Minor groups

6.6. Immunological assays

6.7. Science of Vaccinology

6.7.1. Vaccines

6.7.2. Classification

6.7.3. Schedule

6.7.4. Indications, contraindications

6.7.5. Adverse effects

6.7.6. Catch up doses

6.8. Immunodeficiency

6.8.1. Primary

6.8.2. Secondary

6.9. Autoimmune disease

6.9.1. Basis

6.9.2. Autoantibodies

6.9.3. Clinical considerations

6.10. Transplant Immunology

6.10.1. Stem cell

6.10.2. GVH disease

6.10.3. Solid organ transplant

6.11. Cancer Immunology

7. Pharmacology

7.1. Pharmacokinetics – common medications

7.2. Antimicrobials

7.3. Analgesia, sedation

7.4. Drug interactions

7.5. Adverse effects

7.6. Antidotes for poisons

7.7. Drug induced disease

8. Epidemiology

8.1. Rates

8.2. Principles of study design

8.3. Measures of effects

8.4. Association and causation

8.5. Diagnostic tests

9. Statistics

9.1. Distribution of data

9.2. Measures of Central tendency

9.3. Measures of dispersion

9.4. Probability distributions

9.5. Sampling

9.6. Statistical significance

10. Professionalism and Ethics

10.1. Professionalism

10.1.1. Clinical competencies

10.1.2. Effective communication

10.1.3. Understanding of Ethics

10.1.4. Accountability

10.1.5. Altruism

10.1.6. Excellence

10.1.7. Humanism

10.2. Ethics

10.2.1. Code of ethics

10.2.2. Principles of Ethics

10.2.3. Ethical workup

10.2.4. Doctor-Patient relationship

10.2.5. Confidentiality and privacy

10.2.6. Doctor-Doctor relationship

10.3. Medico-legal essentials

10.3.1. POSCO

10.3.2. Certifications

10.3.3. Documentation

10.3.4. Informed consent

10.3.5. MLC formalities

11. Pedagogy

11.1. How adults learn

11.2. Competencies and Specific Learning Objectives

11.3. Teaching Learning Methodologies

11.4. T-L Media including Power Point Presentations

11.5. Assessments- Formative and Summative

12. Management

12.1. Time Management

12.2. Conflict Management

12.3. Communication especially Listening

12.4. How to study – Lectures? Wards? Journal club?

12.5. Fundamentals of Counselling

12.6. Stress Management

12.7. Teamwork

12.8. Leadership

b. Approaches/Management of common symptoms/signsinclusive of analysis, interpretation, and application of investigations *(In every age group from newborn to adolescent)*

- ***Approaches*** *(Clinical and Investigation) of the following clinical symptoms/ signs* ***Management*** *plans (Investigation, Treatment, Care, Counselling, Education, Follow Up, Rehabilitation Plans) of healthy children (section 1.1) and children with the following clinical symptoms/signs.*

1.1. Healthy Children

1.1.1. Healthy neonate

1.1.2. Healthy infant

1.1.3. Healthy child

1.1.4. Healthy adolescent

1.2. Cardiovascular Symptoms/Signs

1.2.1. Murmurs

1.2.2. Cyanosis

1.2.3. Syncope

1.2.4. Dizziness

1.2.5. Breathlessness

1.2.6. Palpitations

1.2.7. Chest Pain

1.3. Development (and Behavioral) Symptoms/ Signs

1.3.1. Normal development

1.3.2. Delayed milestones

1.3.3. Regression of milestones

1.3.4. Unusual behaviors

1.3.5. Poor scholastic performance

1.3.6. Deviations in sexuality

1.3.7. Dysmorphic features

1.3.8. Suicide attempt

1.3.9. Behavioral issues -disinterest, isolation, poor social interaction

1.3.10. Substance abuse

1.3.11. Abnormal eating behavior

1.3.12. Sleep disturbance

1.3.13. Breath holding spells

1.3.14. Multiple unexplained unrelated complaints

1.3.15. Technology dependence

1.3.16. Speech abnormalities

1.4. Dermatology

1.4.1. Neonatal skin lesions

1.4.2. Infantile skin lesions

1.4.3. Acquired skin rashes in childhood

1.4.4. Urticaria

1.4.5. Neurocutaneous presentations

1.5. Emergencies

1.5.1. Dehydration
1.5.2. Respiratory distress
1.5.3. Hypoxia
1.5.4. Shock
1.5.5. Incessant crying
1.5.6. Sick looking
1.5.7. Status epilepticus
1.5.8. Acute Severe Asthma
1.5.9. Trauma
1.5.10. Animal/human bite
1.5.11. Abuse
1.5.12. Cardio-pulmonary failure
1.5.13. Oliguria/Anuria
1.5.14. Raised intracranial pressure
1.5.15. Coma
1.5.16. Traumatic Brain Injury
1.5.17. Acute poisoning
1.5.18. Envenomation
1.5.19. Medico-legal conditions

1.6. Endocrine Symptoms

1.6.1. Abnormal stature
1.6.2. Hypoglycemia
1.6.3. Delayed puberty
1.6.4. Precocious puberty
1.6.5. Goiter

1.7. **Gastrointestinal (and Hepatic) Symptoms**

1.7.1. Tongue tie
1.7.2. Vomiting and regurgitation
1.7.3. Diarrhea – Acute
1.7.4. Diarrhea – Chronic, persistent, recurrent
1.7.5. Abdominal pain – Acute
1.7.6. Abdominal Pain - Recurrent
1.7.7. Constipation

1.7.8. Jaundice

1.7.9. Gastrointestinal bleed

1.7.10. Hepatomegaly

1.7.11. Splenomegaly

1.7.12. Hepatosplenomegaly

1.7.13. Encopresis

1.7.14. Abdominal distention

1.7.15. Abnormal Liver Function tests

1.8. Genital Symptoms

1.8.1. Atypical or ambiguous genitalia

1.8.2. Menstrual abnormalities

1.8.3. Injuries to genitalia

1.8.4. Foreskin, penile problems

1.8.5. Labial adhesions

1.9. Growth (and Nutrition related) Symptoms

1.9.1. Normal growth

1.9.2. Normal diet

1.9.3. Poor feeding in Infancy

1.9.4. Undernutrition

1.9.5. Failure to thrive

1.9.6. Overweight and obesity

1.10. Hematological Symptoms

1.10.1. Pallor

1.10.2. Bleeding manifestations

1.10.3. Lymphadenopathy

1.10.4. Thrombotic manifestations

1.10.5. Abnormal Hematological parameters including Pancytopenia

1.11. Infectious (and Immunological) Symptoms

1.11.1. Fever with focus

1.11.2. Fever without focus

1.11.3. Fever - persistent or recurrent

1.11.4. Exanthematous Fever

1.11.5. Recurrent infections

1.11.6. Hospital acquired infection

1.11.7. Vaccination Issues– complete, incomplete

1.12. Metabolic Symptoms

1.12.1. Acidosis – metabolic, respiratory

1.12.2. Alkalosis – metabolic, respiratory

1.12.3. Mixed Acid-Base disturbance

1.12.4. Dyselectrolytemia – Hypo/Hypernatremia, Hypo/Hyperkalemia, Hypo/hypercalcemia

1.12.5. Hyperammoniaemia

1.12.6. Hypoglycemia

1.13. Musculoskeletal Symptoms

1.13.1. Joint pains with or without swelling

1.13.2. Low back pain

1.13.3. Deformities of bone growth

1.13.4. Scoliosis

1.13.5. Growing Pains involving lower limbs

1.14. Neonatology

1.14.1. Term gestation

1.14.2. Prematurity

1.14.3. Low birth weight

1.14.4. Neonatal Jaundice

1.14.5. Ill/Sick

1.14.6. Neonatal seizures

1.14.7. Neonatal respiratory distress

1.14.8. Neonatal Apnea

1.14.9. Neonatal Shock

1.14.10. Metabolic/electrolyte disturbances – Glucose, Sodium, Potassium,Calcium, Bicarbonate, Lactate, Ammonia

1.14.11. Feed Intolerance

1.14.12. Spinal/Cranial abnormalities

1.14.13. Post NICU follow up

1.14.14. HIV-HepB-Syphilis exposure/infection

1.14.15. Inadequate breast milk

1.14.16. Antenatal detected renal abnormalities

1.15. Neurological Symptoms

1.15.1. Seizures

1.15.2. Altered sensorium/Coma

1.15.3. Motor weakness

1.15.4. Incessant Irritability

1.15.5. Headache

1.15.6. Abnormal Head circumference

1.15.7. Sensory abnormalities

1.15.8. Abnormal gait

1.15.9. Ataxia

1.15.10. Facial weakness

1.15.11. Involuntary movements

1.16. Ophthalmological Symptoms

1.16.1. Red eye

1.16.2. Watering of eye

1.16.3. Discharge from eye

1.16.4. Poor vision

1.16.5. White reflex

1.16.6. Deviation of eyes

1.17. Otorhino-laryngology Symptoms

1.17.1. Nasal discharge, Nasal congestion, Sneezing

1.17.2. Sore Throat

1.17.3. Ear Pain/discharge

1.17.4. Tonsillar hypertrophy

1.17.5. Epistaxis

1.17.6. Impaired hearing

1.18. Renal and Urological Symptoms

1.18.1. Enuresis

1.18.2. Dysuria

1.18.3. Proteinuria

1.18.4. Hematuria

1.18.5. Edema

1.18.6. Hypertension

1.18.7. Dyselectrolytemia

1.18.8. Polyuria

1.18.9. Scrotal and Inguinal swelling

1.18.10. Oliguria/Anuria

1.19. Respiratory Symptoms

1.19.1. Cough

1.19.2. Breathlessness

1.19.3. Noisy breathing - snoring, stridor, wheeze

1.19.4. Hemoptysis

1.20. Community Situations

1.20.1. Vaccination camps

1.20.2. School Health Checkups

1.20.3. Outbreaks of childhood diseases

1.21 Analysis, interpretation, and application of Investigations

1.21.1. Radiology X-rays (Chest AP/PA/Lateral, abdomen, spine, extremities)

1.21.2. Contrast X-rays (Micturating cystourethrogram)

1.21.3. Ultrasound (Lung: Consolidation, Left Heart failure, effusion; Circulation: Intravascular Volume; Neonatal Brain: Hydrocephalus, Intracranial Collections; Central veins: Patency for US guided central lines; Lymphadenopathy: For US guided FNAC aspirations)

1.21.4. CT scan with/without contrast (Brain: Cerebral edema, Midline shift, Meningitis, Encephalitis, ADEM, Hemorrhage, Infarction, SOLS, Hydrocephalus)

1.21.5. MRI scan (Brain: Gross White vs Grey matter degeneration)

1.21.6. HIDA Scan

1.22. Microbiology

1.22.1. Grams stain of CSF, Pus, Peritoneal fluid

1.22.2. Ziehl Neilson Stain of Sputum, Pus

1.22.3. Hanging drop for motile cholera

1.22.4. PCR reports for infectious disease diagnosis

1.22.5. Culture and sensitivity reports of body fluids

1.23. Pathology

1.23.1. Pathology reports of human tissue

1.24. Routine labs

1.24.1. Hematology reports of Blood counts, peripheral smear, Bleeding and Coagulation parameters, basic

immunology

1.24.2. Urine routine analysis

1.25. Biochemical

1.25.1. Biochemical routine (Electrolytes, Calcium-Phosphate, Renal, Liver profiles, Arterial/venous Blood Gases)

1.25.2. Inborn error of metabolism newborn screening reports

1.25.3. Endocrine (Glucose related, Thyroid related, Hormonal assays, Lipid profiles)

1.26. Electrophysiological Studies

1.26.1. Electrocardiogram

1.27. Lung Function Tests

1.27.1. Spirometry

c. Specific Topics

Understanding the definition, epidemiology, etiopathogenesis, clinical presentation, investigations, complications, differential diagnosis, treatment, prognosis, prevention, follow up and rehabilitation, if required, of the following, but not limited to:

1. Overview

1.1. History of Paediatrics

1.2. State of Health of Children – Global, Regional and India

1.3. Evidence-based Care in Pediatrics

1.4. WHO's Sustainable Development Goals

1.5. National Programs relevant to Child Health

1.6. Ethics in the Care of Children

1.7. Medico-legal aspects relevant to Paediatrics including:

Documentation (Initial History/Examination/Differential Sheet, Progress (SOAP, Problem Oriented), Death and other Certification, Informed Consent, Wound Certificates, POSCO, Financial Receipts, Outpatient/In Patient Registers)

2. Genetics

2.1. Inheritance Patterns

2.2. Genetic Counseling

2.3. Prevention of Genetic Disorders

Management of Genetic Disorders

3. Metabolic Disorders

3.1. Approach to Inborn Errors of Metabolism

3.2. Approach to Hypoglycemia

3.3. Defects of Amino Acid Metabolism

3.3.1. Phenylalanine

3.3.2. Urea Cycle Disorders

3.4. Defects of Lipid Metabolism

3.4.1. Organic Acidemias

3.4.2. Fatty Acid Oxidation

3.4.3. Mitochondrial Disorders

3.4.4. Peroxisomal Disorders

3.4.5. Lysosomal Storage Disorders

3.4.6. Gaucher Disease

3.4.7. Niemann-Pick Disease

3.5. Defects of Carbohydrate Metabolism

3.5.1. Glycogen Storage Disease

3.6. GM1 and GM2 Gangliosidosis

3.7. Mucopolysaccharidoses

3.8. Porphyrias

3.9. Newborn Screening

4. Immunology

4.1. Laboratory Diagnosis of Immune-mediated Diseases

4.2. Primary Immunodeficiency Disorders

4.2.1. Antibodies

4.2.2. Cellular

4.2.3. Multiple types

4.2.3.1. SCID (Severe combined immunodeficiency)

4.3. Phagocytic system

4.3.1. Neutrophils

4.3.2. Leukopenia

4.3.3. Leuocyctosis

4.4. Complement pathway

4.4.1. Complement deficiencies

4.5. Intravenous Immunoglobulin

4.6. Multisystem Inflammatory Syndrome of Childhood

5. Allergy

5.1. Basis of Allergy

5.2. Allergic rhinitis

5.3. Atopic dermatitis

5.4. Urticaria, Angioedema

5.5. Anaphylaxis

5.6. Asthma

5.7. Serum sickness

5.8. Drug allergies

5.9. Food allergies

6. Fluid and Electrolytes

6.1. Body Fluids – Composition, Osmolality

6.2. Fluid Therapy - Maintenance, Replacement

6.3. Sodium

6.4. Potassium

6.5. Calcium

6.6. Magnesium

6.7. Phosphorus

6.8. Acid-base Abnormalities

7. Therapeutics

7.1. Principles of Drug Therapy

7.2. Administration of Medications

7.3. Pre-anesthesia Checkup

7.4. Procedural sedation

7.5. Analgesia

8. Acutely Ill

8.1. Assessment and Triage

8.2. Cardiopulmonary Resuscitation

8.2.1. Basic Life Support

8.2.2. Pediatric Advanced Life Support

8.3. Minor Injuries – Abrasions, Lacerations

9. Pediatric Intensive Care

9.1. Shock

9.2. Respiratory Failure

9.3. Pediatric Acute Respiratory Distress Syndrome

9.4. Ventilation – Non-Invasive and Invasive

9.5. Sedation, Analgesia and Paralysis

9.6. Nutrition in Intensive Care

9.7. ECMO

9.8. Concepts of Futility, Do not Resuscitate, Withdrawal of Care

9.9. Palliative Care

9.10. Death

10. Toxins

10.1. Clinical Approach to a Poisoned Child

10.2. Poisonings by Common Drugs

10.3. Hydrocarbon Poisoning

10.4. Poisoning in the Household

10.5. Corrosive Poisoning

10.6. Snakebite

10.7. Insect Stings including Bee, Wasp, Scorpion Sting

11. Injuries

11.1. Poly Trauma: Stabilization, Triage, and Transport

11.2. Drowning/Submersion Injuries

11.3. Animal-related Injuries

11.4. Burn Injuries

11.5. Cold Injuries

12. Neonatology

12.1. Neonatal Mortality and Morbidities

12.2. Fetal Physiology and Growth

12.3. Maternal Influences on Fetus

12.4. Transition of the Fetus to Newborn

12.5. Intrauterine diagnosis and management of Fetal disease

12.6. Organization of Neonatal Care

13. Normal Newborn

13.1. Delivery Room Care of the Newborn

13.2. Newborn Resuscitation

13.3. Assessment of the Newborn

13.4. Care of the Normal Newborn

13.5. Maintenance of Temperature

13.6. Breastfeeding and Lactation Management

14. Disorders of Weight and Gestation in Neonates

14.1. Low Birthweight

14.1.1. Feeding of Low-birth weight

14.1.2. Intrauterine Growth Restriction

14.2. Prematurity

14.3. Post term

14.4. Large for Gestational Age

15. High-risk Newborn

15.1. Recognition of High-risk neonate

15.2. Multiple-gestational pregnancies

15.3. Birth Injuries

15.4. Perinatal Asphyxia

15.5. Jaundice in the newborn

15.6. Infant of Diabetic Mother

15.7. Neonatal Hypoglycemia

15.8. Anemia and Polycythemia

15.9. The Bleeding Neonate

15.10. Hemorrhagic Disease of the

15.11. Thrombocytopenia in the Newborn

15.12. Cyanosis in the Newborn

15.13. Necrotizing Enterocolitis

15.14. Retinopathy of Prematurity

15.15. Dyselectrolytemia, Hypocalcemia, Hypermagnesemia

15.16. Neonatal Transport

15.17. Follow-up of the High-risk Neonate

16. Neonatal Infections

16.1. Neonatal Sepsis – Early and Late
16.2. Superficial Infections in Neonates
16.3. Neonatal Meningitis
16.4. Deep-seated Infections in Neonates
16.5. Neonatal Tetanus
16.6. Intrauterine Infections

17. Neonatal Neurological Problems

17.1. Seizures in the Neonates
17.2. Hypoxic Ischemic Encephalopathy
17.3. Intra-cranial/ventricular Hemorrhage
17.4. Peripheral nerve injuries

18. Neonatal Respiratory Problems

18.1. Approach to a Neonate with Respiratory Distress
18.2. Neonatal Apnea Neonatal Ventilation
18.3. Hyaline Membrane Disease
18.4. Transient Tachypnea of the Newborn
18.5. Meconium Aspiration Syndrome
18.6. Pulmonary Air Leaks in the Newborn
18.7. Persistent Pulmonary Hypertension (PPHN)
18.8. Pulmonary Hemorrhage
18.9. Bronchopulmonary Dysplasia
18.10. Extra pulmonary air leaks

19. Neonatal Cardiac Problems

19.1. Neonate with a murmur
19.2. Patent ductusarteriosus
19.3. Ductus dependent shunts

20. Hematological disorders in Neonates

20.1. Anemia in Neonate
20.2. Hemolytic Disease
20.3. Polycythemia
20.4. Hemorrhagic Disease

21. Congenital Malformations

21.1. Esophageal Atresia and Tracheoesophageal Fistula

21.2. Diaphragmatic Hernia and Eventration

21.3. Gastrointestinal and Abdominal Malformation

21.4. Genitourinary Malformations

21.5. CNS Malformations

21.6. Single Umbilical Artery, Polydactyly, Skin Tags

22. Growth: Normal and Abnormal

22.1. Normal Growth

22.2. Factors Affecting Growth

22.3. Assessment of Physical Growth

22.4. Disorders of Growth (Failure to Thrive, Overweight and Obesity)

22.5. Abnormalities of Stature

23. Development and Developmental Delay

23.1. Theories of Development and Behaviour

23.2. Laws of Development

23.3. Factors Affecting Development

23.4. Normal Development

23.5. Screening of Development and Behaviour

23.6. Approach to Diagnosis of Developmental Delay: Developmental Screening and Surveillance

23.7. Global Developmental Delay

23.8. Specific Developmental Delays

23.9. Cerebral Palsy

23.10. Intellectual Disability

23.11. Learning disabilities

23.12. Hearing Impairment

23.13. Mental Retardation

24. Behavior and Learning

24.1. Evaluation of Mental Well-Being

24.2. Psychosocial assessments

24.3. Technology Dependence

24.4. Bulling

24.5. Common Behavioral Problems

24.6. Tantrums and Breath-Holding
24.7. Enuresis and Encopresis
24.8. Sleep Medicine
24.9. Common Speech, Language, and Communication Disorders
24.10. Learning Disorders
24.11. Dyslexia
24.12. Attention-Deficit Hyperactivity Disorder
24.13. Oppositional Defiant and Conduct Disorders
24.14. Autism Spectrum Disorder
24.15. Rett Syndrome
24.16. Anorexia Nervosa and Bulimia
24.17. Anxiety Disorders
24.18. Suicide
24.19. Management of Psychological Illness

25. Nutrition and Nutritional Disorders

25.1. Nutritional Requirements
25.2. Nutritive Values of Indian Foods
25.3. Infant and Young Child Feeding
25.4. Adolescent Feeding
25.5. Feeding during Childhood and Food Allergy
25.6. Undernutrition: Prevalence and Etiology
25.7. Pathophysiology of Undernutrition
25.8. Malnutrition – Moderate and Severe Acute
25.9. Vitamin A
25.10. Vitamin B Complex
25.11. Vitamin C and Scurvy
25.12. Vitamin D, Nutritional Rickets, and Hypervitaminosis D
25.13. Iodine Deficiency Disorders
25.14. Zinc in Child Health
25.15. Trace Elements in Nutrition and Health
25.16. Fluorosis
25.17. Nutritional Rehabilitation including Diet Prescription
25.18. Enteral and Parenteral Nutrition
25.19. National Nutrition Programs

26. Immunization

26.1. Basic Concepts of Vaccination

26.2. Vaccine Administration Practices

26.3. Scheduling of Vaccines

26.4. Vaccine Storage and Cold Chain

26.5. Adverse Events following Immunization

26.6. BCG Vaccine

26.7. Poliovirus Vaccines

26.8. Diphtheria, Tetanus, and Pertussis Vaccines

26.9. Hepatitis B Vaccine

26.10. HaemophilusInfluenzae Type B (HIB) Vaccines

26.11. Measles Vaccine

26.12. Rubella Vaccines

26.13. Mumps Vaccine

26.14. Typhoid Fever Vaccines

26.15. Japanese Encephalitis Vaccine

26.16. Rabies Vaccines

26.17. Pneumococcal Vaccines

26.18. Rotavirus Vaccines

26.19. Cholera Vaccines

26.20. Varicella Vaccine

26.21. Hepatitis A Vaccine

26.22. Meningococcal Vaccine

26.23. Seasonal and Pandemic Influenza Vaccines

26.24. Human Papillomavirus Vaccines

26.25. Dengue Vaccines

26.26. Yellow Fever Vaccine

26.27. Combination Vaccines

26.28. Covid-19 Vaccines

26.29. Immunization in Special Situations

27. Adolescence

27.1. Gender, Sexual Identity and Sexuality

27.2. Psychosocial Development

28. Health Issues in Adolescence

- 28.1. Factors Influencing Adolescent Health
- 28.2. Adolescent Nutrition
- 28.3. Mental Health
- 28.4. Injuries, Violence, and Suicide
- 28.5. Menstrual Disorders
- 28.6. Polycystic Ovary Syndrome
- 28.7. Teenage Pregnancy
- 28.8. Sexually Transmitted Infections
- 28.9. Substance Abuse
  - 28.9.1. Alcohol
  - 28.9.2. Tobacco
  - 28.9.3. Other substances

29. Care of the Adolescents

- 29.1. Adolescent Counseling
- 29.2. Promoting Health of Adolescents
- 29.3. Adolescent Friendly Health Services

30. Infectious Diseases

- 30.1. Epidemiology of Infectious Diseases
- 30.2. Laboratory Diagnosis of Infection
- 30.3. Microbiome and Child Health
- 30.4. Antimicrobial Resistance
- 30.5. Infection Control and Prevention

31. Fever

- 31.1. Fever: General Principles of Management
- 31.2. Fever with/without focus
- 31.3. Fever of Unknown Origin
- 31.4. Infections in Immunocompromised conditions

32. Bacterial Infections

- 32.1. Natural History of Bacterial Infection
- 32.2. Principles of Antibiotic Therapy
- 32.3. Gram Positive Infections
  - 32.3.1. Streptococcal Infections

32.3.1.1. Pneumococcal Infections

32.3.1.2. Streptococcal Group A

32.3.1.3. Streptococcal Group B

32.3.1.4. Streptococcal Non A, Non B

32.3.2. Staphylococcal Infections

32.3.3. Enterococcus

32.3.4. Diphtheria

32.3.5. Nocardiosis

32.3.6. Listeria monocytogenes

32.3.7. Actinomycosis

32.4. Gram Negative Infections

32.4.1. Haemophilusinfluenzae

32.4.2. Neisseria

32.4.3. Pseudomonas

32.4.4. Pertussis

32.4.5. Salmonella

32.4.5.1. Nontyphoidal Salmonellosis

32.4.5.2. Enteric Fever

32.4.6. Shigella

32.4.7. Escherichia coli

32.4.8. Cholera

32.4.9. Campylobacter

32.4.10. Yersina

32.4.11. Aeromonas

32.4.12. Brucella

32.4.13. Moraxella catarrhalis

32.4.14. Helicobacter pylori

32.5. Anaerobic Bacterial

32.5.1. Clostridium tetani

32.5.2. Clostridium botulinum

32.5.3. Clostridium difficile

32.6. Spirochetal Infections

32.6.1. Treponemapallidum

32.6.2. Leptospirosis

32.6.3. Borrelia

32.6.3.1. Lyme

32.6.3.2. Relapsing Fever

32.7. Mycoplasma

32.8. Chlamydia

32.8.1. Chlamydia pneumonia

32.8.2 Chlamydia trachomatis

32.8.3. Psittacosis

32.9. Rickettsia

32.9.1. Spotted Fever

32.9.2. Scrub Typhus

32.9.3. Typhus

32.9.4. Ehrlichiosis

32.9.5. Q fever

33. Mycobacterial Infections

33.1. Childhood Tuberculosis: Epidemiology, Pathogenesis, Clinical Features, and Preventio

33.2. Diagnostic Tools for Tuberculosis in Children

33.3. Antitubercular Drugs and RNTCP

33.4. Guidelines for Childhood Tuberculosis

33.5. Drug Resistant Tuberculosis

33.6. Atypical Mycobacterial Infections

33.7. Leprosy

34. Viral Diseases

34.1. Epidemiology of Viral Infections

34.2. Principles of Antiviral Drugs

34.3. Measles

34.4. Mumps

34.5. Rubella

34.6. Roseola

34.7. Epstein-Barr

34.8. Cytomegalovirus

34.9. Influenza
34.10. Parainfluenza
34.11. Respiratory syncytial virus
34.12. Human metapneumovirus
34.13. Rhinovirus
34.14. Adenovirus
34.15. Coronavirus
34.16. Rotavirus
34.17. Human Papillomavirus
34.18. Arbovirus
34.18.1. Japanese Encephalitis
34.18.2. Other Encephalitis
34.18.3. Tick-borne Encephalitis
34.18.4. Chikungunya
34.18.5. Zika
34.19. Varicella-zoster
34.20. Herpes Simplex
34.21. Rabies
34.22. Parvovirus Infections
34.23. NonpolioEnteroviral Infections
34.24. Poliomyelitis
34.25. Viral Hepatitis
34.26. HIV
34.27. Human Lymphotrophic 1 and 2
34.28. Dengue
34.29. Yellow Fever
34.30. Ebola, Hanta
34.31. Rabies
34.32. Viral Hemorrhagic Fevers
34.33. Covid-19

35. Protozoal Disease

35.1. Epidemiology of Parasitic Infections
35.2. Principles of Antiparasitic therapy
35.3. Malaria

35.4. Leishmaniasis
35.5. Giardiasis
35.6. Amebiasis
35.7. Filariasis
35.8. Cryptosporidiosis
35.9. Toxoplasmosis
35.10. Helminthiasis
35.10.1. Hookworm Infestation
35.10.2. Ascariasis
35.10.3. Trichuriasis
35.10.4. Enterobiasis
35.10.5. Strongyloidiasis
35.10.6. Tapeworm Diseases
35.10.7. Cysticercosis
35.10.8. Trichinosis
35.10.9. Toxocara
35.10.10. Intestinal, Liver, and Lung Flukes
35.10.11. Hydatid Disease: Echinococcosis
35.10.12. Schistosomiasis

36. Fungal Infections

36.1. Fungi
36.2. Principles of Antifungal Therapy
36.3. Candidiasis
36.4. Aspergillosis
36.5. Malassezia
36.6. Cryptococcosis
36.7. Coccidioidomycosis
36.8. Blastomycosis
36.9. Histoplasmosis
36.10. Mucormycosis
36.11. Pneumocystis Jirovecii

37. Diarrheal Illnesses

37.1. Acute Watery Diarrhea
37.2. Dysentery

37.3. Cholera

37.4. Persistent Diarrhea

37.5. Chronic Diar*rhea*

37.6. Antibiotic Associated Diarrhea

38. Gastrointestinal Disorders

38.1. Anatomy and Physiology

38.2. Common Symptoms of Gastrointestinal Diseases

38.3. Oral Cavity disorders

38.3.1. Malocclusion

38.3.2. Dental Caries

38.3.3. Periodontal disease

38.3.4. Common lesions of soft palate

38.3.5. Cleft Lip and Cleft Palate

38.3.6. Diseases of Salivary Glands

38.4. Esophageal atresia, Tracheoesophageal Fistula

38.5. Disorders of Esophageal Motility

38.6. Gastroesophageal Reflux

38.7. Esophagitis

38.8. Hiatal Hernia

38.9. Ingestions

38.9.1. Foreign Body

38.9.2. Caustic

38.10. Infantile Hypertrophic Pyloric Stenosis, Volvulus, Duplication

38.11. Duodenal Obstruction

38.12. Malrotation

38.13. Intestinal duplication

38.14. Meckel Diverticulum

38.15. Chronic obstructive pseudoobstruction

38.16. Chronic Abdominal Pain—Functional Abdominal Pain

38.17. Acid Peptic Disease

38.18. Pancreas – Function, Tests

38.18.1. Pancreatitis

38.18.2. Treatment of Pancreatic insufficiency

38.19. Constipation

38.20. Hirschsprung Disease

38.21. Malabsorption Disorders

38.21.1. Assessment

38.21.2. Celiac

38.21.3. Enzyme Deficiencies

38.22. Inflammatory Bowel Disease

38.23. Intestinal Obstruction

38.24. Intussusception

38.25. Appendicitis

38.26. Abdominal Tuberculosis

38.27. Ascites

38.28. Umbilical Hernia

38.29. Inguinal Hernia

38.30. Testicular Torsion

38.31. Anorectal Disorders

38.31.1. Anal Fissure

38.31.2. Hemorrhoids

38.31.3. Prolapse

38.31.4. Pilonidal sinus

38.31.5. Anorectal malformations

38.32. Cyclic vomiting

39. Hepatobiliary Diseases

39.1. Liver Function Tests

39.2. Neonatal Cholestasis

39.3. Portal Hypertension

39.4. Gastrointestinal Bleeding

39.5. Metabolic Liver disease

39.5.1. Wilson

39.5.2. Other

39.6. Liver Abscess

39.7. Viral Hepatitis

39.8. Chronic Liver Disease

39.9. Acute Liver Failure

39.10. Autoimmune Hepatitis

39.11. Drug induced Hepatitis

39.12. Cystic disease of Liver

39.13. Liver transplantation

39.14. Liver Tumors

39.15. Peritoneum

39.15.1. Ascites

39.15.2. Peritonitis

39.16. Epigastric hernia

40. Disorders of Hematopoietic System

40.1. The Hematopoietic System

40.2. Anemia: Etiology and Classification

40.3. Inadequate Production

40.3.1. Physiological anemia of infancy

40.3.2. Congenital Bone Marrow Failure

40.3.3. Aplastic Anemia

40.3.4. Iron Deficiency Anemia

40.3.5. Megaloblastic Anemia

40.3.6. Anemia of Chronic disease

40.3.7. Congenital dyserthropoietic anemia

40.4. Hemolytic Anemia

40.4.1. Hemoglobinopathies

40.4.1.1. Sickle Cell Disease

40.4.1.2. Thalassemia

40.4.2. RBC Membrane Defects

40.4.3. Red Blood Cell Enzyme Defects

40.4.4. Immune Hemolytic Anemia

40.5. Polycythemia

40.6. Hemorrhagic and Thrombotic disorders

40.6.1. Coagulation Disorders

40.6.2. Hemophilia

40.6.3. Other Clotting Factor Deficiencies

40.6.4. Von Willebrand Disease

40.6.5. Thrombotic disorders

40.6.6. Disseminated Intravascular Coagulation

40.7. Platelet

40.7.1. Immune Thrombocytopenia

40.7.2. Hemolytic Uremic Syndrome

40.7.3. Thrombotic Thrombocytopenic Purpura

40.7.4. Kasabach- Merritt Syndrome

40.7.5. Platelet Function Defects

40.8. Blood Component Therapy

40.9. Spleen

40.9.1. Splenomegaly

40.9.2. Splenectomy

40.10. Lymphatics

40.10.1. Lymphadenopathy

41. Respiratory Diseases

41.1. Congenital Malformations of the Upper Respiratory Tract

41.2. Epistaxis

41.3. Nasal Polyps

41.4. Allergic Rhinitis

41.5. Otitis Media

41.6. Common Cold

41.7. Acute Pharyngitis

41.8. Retropharyngeal abscess

41.9. Sinusitis

41.10. Tonsils and Adenoids

41.11. Community Acquired Pneumonia

41.12. Pleural effusion, Empyema

41.13. Bronchiectasis

41.14. Pneumothorax, Pneumomediastinum, Pyopneumothorax

41.15. Skeletal deformities of Chest

41.16. Obstructive Sleep Apnea

41.17. Congenital Malformations of the Respiratory Tract

41.18. Congenital disorders of Lung

41.19. Croup, Epiglottitis, Laryngitis, Tracheitis

41.20. Bronchiolitis

41.21. Alpha-1 Antitrypsin Deficiency

41.22. Aspiration Syndromes
41.23. Preschool Wheeze and Bronchial Asthma
41.24. Aerosol Therapy
41.25. Pneumonia
41.26. Parapneumonic Effusion and Empyema
41.27. Pneumothorax and Air Leaks
41.28. Persistent and Recurrent Pneumonia
41.29. Interstitial Lung Disease
41.30. Hemoptysis and Alveolar Bleeds
41.31. Primary Ciliary Dyskinesia
41.32. Cystic Fibrosis
41.33. Bronchiectasis
41.34. Lung Abscess
41.35. Foreign Body Aspiration
41.36. Central Hypoventilation
41.37. Acute Respiratory Distress Syndrome
41.38. SIDS

42. Cardiovascular Disorders

42.1. Genetic Basis of Heart Diseases
42.2. Chest Skiagram in Heart Disease
42.3. Electrocardiogram
42.4. Echocardiography
42.5. Congestive Heart Failure
42.6. Cardiac Malposition
42.7. Acyanotic Congenital Heart Disease, Left to Right shunt
    42.7.1. Ventricular Septal Defects
    42.7.2. Patent DuctusArteriosus
    42.7.3. Atrial Septal Defects
    42.7.4. PAPVC
    42.7.5. Atrioventricular Septal Defects
42.8. Acyanotic Congenital Heart Disease, Obstructive
    42.8.1. Pulmonary Valve Stenosis
    42.8.2. Coarctation of Aorta
    42.8.3. Pulmonary Venous Hypertension
42.9. Acyanotic Congenital Heart Disease, Regurgitation

42.9.1. Mitral Valve Prolapse

42.10. Cyanotic Congenital Heart Disease, reduced Pulmonary flow

42.10.1. Tetralogy of Fallot and Variants

42.10.2. Tricuspid Atresia

42.10.3. Double outlet Right Ventricle

42.10.4. Ebstein Anomaly

42.11. Cyanotic Congenital Heart Disease, Increased Pulmonary flow

42.11.1. Transposition of Great Arteries and variants

42.11.2. TruncusArteriosus

42.11.3. TAPVC

42.11.4. Hypoplastic Left Heart Syndrome

42.12. Others

42.12.1. Anomalies of the Aortic Arch

42.12.2. Pulmonary Arterial Hypertension

42.13. Acquired Heart Disease

42.13.1. Acute Rheumatic Fever

42.13.2. Rheumatic Heart Disease

42.13.3. Infective Endocarditis

42.13.4. Myocardial Diseases: Myocarditis and Cardiomyopathies

42.13.5. Diseases of the Pericardium

42.13.6. Kawasaki disease

42.14. Cardiac Arrhythmias

42.15. Cardiac Emergencies

42.16. Heart Failure

42.17. Systemic Hypertension

43. Disorders of the Kidney and Urinary Tract

43.1. Investigations for Kidneys and Urinary Tract

43.2. Congenital Anomalies of Kidneys and Urinary Tract

43.2.1. Cystic Kidney Diseases

43.3. Glomerular Disease

43.3.1. Glomerulonephritis

43.3.1.1. Acute Poststreptococcal Glomerulonephritis
43.3.1.2. Membranous Nephropathy
43.3.1.3. Membranoproliferative Glomerulonephritis
43.3.1.4. RapidlyProgressive Glomerulonephritis
43.3.2. IgA nephropathy
43.3.3. Alport syndrome
43.4. Systemic Vasculitis and Lupus Nephritis
43.5. Goodpasture Disease
43.6. Henoch-SchonleinPurpura Nephritis
43.7. Hemolytic Uremic Syndrome
43.8. Toxic Nephropathy
43.9. Tubulointerstitial Disease
43.9.1. Pyelonephritis
43.9.2. Tubulointerstitial nephritis
43.9.3. Papillary necrosis
43.9.4. Acute Tubular Necrosis
43.10. Vascular Disease
43.10.1. Renal vein Thrombosis
43.10.2. Hypercalciuria
43.10.3. Nephrocalcinosis
43.11. Infections
43.11.1. Urinary Tract Infection
43.11.2. Cystitis
43.11.3. Urethritis
43.11.4. Hemorrhagic cystitis
43.11.5. Pyelonephritis
43.12. Proteinuria
43.12.1. Transient, Orthostatic
43.12.2. Nephrotic Syndrome
43.13. Tubular Disorders
43.13.1. Renal Tubular Disorders
43.13.2. Nephrogenic Diabetes Insipidus
43.13.3. Bartter Syndrome
43.13.4. Gitelman Syndrome

43.14. Renal Failure

43.14.1. Acute Kidney Injury

43.14.2. Chronic Kidney disease

43.14.3. End-stage renal disease

43.14.4. Renal Replacement Therapy

43.14.5. Renal Transplantation

43.15. Renal Calculi

43.16. Refractory Rickets

43.17. Hypertension

43.18. Vesicoureteral Reflux

43.19. Voiding Disorders

43.20. Penile anomalies

44. Gynecological Issues

44.1. Vaginal bleeding in prepubertal children

44.2. Breast concerns

44.3. Female genital mutilation

45. Neurological Disorders

45.1. Approach to Neurological Disorders including localization

45.2. Cerebrospinal Fluid and Neurophysiology

45.3. Neuroimaging

45.4. Congenital Anomalies

45.4.1. Neural Tube Defects and Spinal Cord Malformations

45.4.2. Microcephaly

45.4.3. Brain Malformations

45.4.4. Hydrocephalus

45.4.5. Craniosynostos

45.5. Seizures

45.5.1. Febrile Seizures

45.5.2. Unprovoked Seizures and Epilepsy

45.5.2.1. Generalized

45.5.2.2. Focal

45.5.2.3. Reflex Seizures

45.5.3. Treatment of Seizures

45.5.4. Status Epilepticus

45.5.5. Nonepileptic Paroxysmal Disorders

45.6. Headaches

45.6.1. Migraine

45.6.2. Tension Headache

45.6.3. Secondary Headaches

45.7. Neurocutaneous Syndromes

45.8. Movement Disorders

45.9. Encephalopathies

45.9.1. Cerebral Palsy

45.9.2. Autoimmune

45.9.3. Mitochondrial

45.10. Neurodegenerative Disorders

45.10.1. Grey versus White Matter

45.10.2. Sphingolipidosis

45.10.3. Neuronal CeroidLipofuscinoses

45.10.4. Adrenoleucodystrophy

45.11. Demyelinating Disorders

45.11.1. Acute Disseminated Encephalomyelitis

45.11.2. Optic Neuritis

45.11.3. Transverse Myelitis

45.11.4. Multiple Sclerosis

45.11.5. Autoimmune and Paraneoplastic

45.12. Stroke

45.12.1. Arterial versus Venous

45.13. CNS Vasculitis

45.14. CNS Infections

45.14.1. Acute Pyogenic Meningitis

45.14.2. Tuberculosis of the Central Nervous System

45.14.3. Viral Meningoencephalitis

45.14.4. Neurocysticercosis

45.14.5. Brain Abscess

45.15. PseudotumorCerebri

45.16. Coma and Raised Intracranial Pressure

45.17. Brain Death

45.18. Infantile Tremor Syndrome

45.19. Neurometabolic Disorders

45.20. Spinal Cord Disorders

45.21. Traumatic Brain Injury

45.22. Neuro-Rehabilitation

45.22.1. Traumatic Brain Injury

45.22.2. Spinal cord Injury

45.22.3. Spasticity

45.22.4. Brachial plexus injury

45.22.5. Meningomyelocele

45.22.6. Disabled Child

46. Neuromuscular Disorders

46.1. Approach to Diagnosis of Neuromuscular Disorders

46.2. Floppy Infant

46.3. Congenital Muscle Disorders

46.3.1. Congenital Myopathies

46.3.2. Arthrogryposis

46.4. Muscular Dystrophies

46.4.1. Duchenne and Becker Muscular Dystrophy

46.4.2. Myotonic Muscular Dystrophy

46.4.3. Limb Girdle Muscular Dystrophy

46.4.4. Fascio-scapulo-humeral Muscular Dystrophy

46.5. Endocrine/Toxic Myopathies

46.6. Metabolic Myopathies

46.6.1. Periodic Paralysis

46.6.2. Glucogenoses

46.6.3. Mitochondrial

46.6.4. Lipid

46.7. Neuromuscular Transmission Disorders

46.7.1. Myasthenia Gravis

46.7.2. Spinal Muscular Atrophy

46.7.3. Motor Neuron Disease

46.8. Hereditary Motor Sensory Neuropathies

46.8.1. Peroneal Muscular Atrophy

46.8.2. Refsum Disease

46.8.3. Fabry Disease

46.8.4. Leukodystrophy

46.8.5. Acute Flaccid Paralysis

46.9. Toxic Neuropathies

46.10. Autonomic Neuropathy

46.11. Guillain-Barré Syndrome

46.12. Bell Palsy

47. Disorders of the Endocrine System

47.1. Physiology of Neuroendocrinology

47.2. Hypopituitarism

47.2.1. Growth Hormone Deficiency and Resistance

47.2.2. Polyuria, Diabetes Insipidus and Syndrome of Inappropriate Secretion of ADH

47.3. Thyroid Disorders

47.3.1. Thyroid Hormone Physiology

47.3.2. Hypothyroidism

47.3.3. Thyroiditis

47.3.4. Hyperthyroidism

47.3.5. Goiter and Thyroid Nodules

47.3.6. Newborn Screening for Congenital Hypothyroidism

47.4. Parathyroid Disorders

47.4.1. Bone Mineral and Hormone Physiology

47.4.2. Calcium Disorders

47.4.3. Metabolic Rickets

47.4.4. Disorders with Bone Fragility

47.4.5. Hypoparathyroidism

47.4.6. Pseudo hypothyroidism

47.4.7. Hyperparathyroidism

47.5. Pubertal Development

47.5.1. Normal Puberty

47.5.2. Delayed Puberty

47.5.3. Precocious Puberty

47.6. Adrenal Gland Disorders

47.6.1. Normal Development and Physiology of the Adrenal Gland

47.6.2. Congenital Adrenal Hyperplasia

47.6.3. Adrenal Insufficiency

47.6.4. Cushing Syndrome

47.6.5. Primary Aldosteronism

47.6.6. Pheochromocytoma

47.7. Gonad Disorders

47.7.1. Testicular Hypofunction

47.7.2. Ovarian Hypofunction

47.7.3. Gynecomastia

47.7.4. Disorders of Sex Development

47.7.5. Cryptorchidism and Micropenis

47.8. Glucocorticoid Use and Withdrawal

47.9. Diabetes Mellitus

47.9.1. Classification of Diabetes Mellitus

47.9.2. Type 1 Diabetes Mellitus

47.9.3. Type 2 Diabetes Mellitus

47.9.4. Acute and Chronic Complications of Diabetes Mellitus

47.10. Monogenic Obesity

47.11. Hyperlipidemia

47.12. Endocrine Consequences of Thalassemia Major

47.13. Endocrine Effects of Radiation and Cancer Chemotherapy

47.14. Adult Consequences of IUGR and Preterm Birth

48. Malignancies in Children

48.1. Epidemiology and Biology of Cancers

48.2. Principles of Diagnosis and Therapy of Cancer

48.3. Leukemias

48.3.1. Acute Lymphoblastic Leukemia

48.3.2. Acute Myelogenous Leukemia

48.3.3. Chronic Myelogenous Leukemia

48.3.4. Infantile Leukemia

48.4. Lymphoma

48.4.1. Hodgkin Lymphoma

48.4.2. Non-Hodgkin Lymphoma

48.5. Brain Tumors

48.6. Neuroblastoma

48.7. Wilms Tumor

48.8. Soft Tissue Tumors

48.9. Bone Tumors

48.10. Retinoblastoma

48.11. Gonadal, Germ cell neoplasms

48.12. Hemangioma

48.13. Lymphangiomas, Cystic Hygromas

48.14. Thyroid Tumours

48.15. Nasopharyngeal Carcinoma

48.16. Adrenal Tumours

48.17. Histiocytosis

48.17.1. LCH

48.17.2. HemophagocyticLymphohistiocytosis

48.18. Oncological Emergencies and Supportive Care

48.19. Hematopoietic Stem Cell Transplant

49. Rheumatological Disorders

49.1. Approach to a Child with Rheumatological Disorder

49.2. Laboratory Investigations for Rheumatological Disorders

49.3. Drugs and Principles of Management for Rheumatic Disorders

49.4. Juvenile Idiopathic Arthritis
49.5. Reactive, Post-Infectious Arthritis
49.6. Systemic Lupus Erythematosus: Clinical Features and Diagnostic Criteria
49.7. Management of Systemic Lupus Erythematosus
49.8. Juvenile Dermatomyositis
49.9. Large Vessel Vasculitis: Takayasu Arteritis
49.10. Medium Vessel Vasculitis: Kawasaki Disease and PolyarteritisNodosa
49.11. Small Vessel Vasculitis:Henoch-SchönleinPurpuraand ANCA Associated Vasculitis
49.12. Juvenile Scleroderma
49.13. Antiphospholipid Syndrome
49.14. Growing Pains

50. Common Eye Abnormalities

50.1. Common Visual Problems
50.2. Congenital Anomalies
50.3. Refractive Errors
50.4. Cornea and Conjunctiva
50.5. Uveitis
50.6. Cataract and Lens
50.7. Glaucoma
50.8. Optic Nerve and Pupil
50.9. Strabismus and Motility Disorders
50.10. Eyelid, Orbit, and Lacrimal Sac
50.11. Ocular Injuries
50.12. Orbital Infections
50.13. Ocular Manifestations of Systemic Disorders

51. Common ENT Problems

51.1. Hearing Loss
51.2. Congenital malformations of Ear
51.3. External Otitis
51.4. Otitis Media
51.5. Mastoiditis
51.6. Inner Ear

52. Common Skin Problems

52.1. Skin of the Newborn: Physiological and Pathological Changes

52.2. Care of Skin in the Newborn

52.3. Infections and Infestations

52.4. Congenital Cutaneous Malformations

52.5. Vitiligo and Other Hypopigmentary Diseases

52.6. Atopic Dermatitis

52.7. Contact Dermatitis

52.8. Urticaria and Mastocytosis

52.9. Psoriasis, GianottiCrosti Syndrome

52.10. AcanthosisNigrans

52.11. Cutaneous Drug Reactions

52.12. Cutaneous Manifestations of Nutritional Deficiency

52.13. Cutaneous Manifestations of Collagen Vascular Diseases

52.14. Neurocutaneous Syndromes

52.15. Vesiculobullous Disorders

52.16. Papulosquamous Disorders

52.17. Ichthyosis

52.18. Genetic Cutaneous Disorders

52.19. Hair Disorders

52.20. Nail Disorders

52.21. Infections of Skin

52.21.1. Impetigo

52.21.2. Subcutaneous Infections

52.21.3. Staphylococcal Scalded Skin Syndrome

52.21.4. Ecthyma

52.21.5. Fungal Infections

52.21.6. Viral Infections

52.21.7. Arthropod bites

52.21.8. Scabies

52.21.9. Pediculosis

52.21.10. Acne

53. Disorders of Bones and Joints

- 53.1. Assessment of the Locomotor System
- 53.2. Deformities of Foot and Toes
  - 53.2.1. Congenital TalipesEquinovarus
- 53.3. Torsional deformities of Limb
- 53.4. Leg Length discrepancies
- 53.5. Transient Monoarticularsynovitis
- 53.6. Legg-Calvé-Perthes Disease
- 53.7. Neck Problems
  - 53.7.1. Torticollis
  - 53.7.2. Cervical anomalies
- 53.8. Scoliosis and Kyphosis
- 53.9. Developmental Dysplasia of the Hip (DDH)
- 53.10. Osteomyelitis
- 53.11. Septic Arthritis
- 53.12. Osgood-Schlatter Disease
- 53.13. Arthrogryposis
- 53.14. Injuries to Bones/Joints
- 53.15. Skeletal Dysplasia
- 53.16. Osteogenesisimperfecta
- 53.17. Marfan Syndrome
- 53.18. Metabolic Bone Disease
  - 53.18.1. Hypo/Hyperphosphatemia
  - 53.18.2. Osteoporosis

54. Vulnerable Children

- 54.1. Street Children
- 54.2. Child Labor
- 54.3. Child Abuse and Neglect
- 54.4. Adoption: Medical and Legal Issues
- 54.5. Rights of the Child

55. Environmental Health

- 55.1. Climate Change and its impact on Health
- 55.2. Air Pollution and its impact on Health
- 55.3. Biomedical Waste Management

56. Community Pediatrics

56.1. Indicators of Child Health

56.2. Environment and Child Health

56.3. Lead Poisoning

56.4. Adoption

56.5. Travel Medicine

56.6. Protection of Children from Sexual Offences ACT 2012

56.7. Rights of People With Disability Act 2016

56.8. National Programs for Child Health as relevantto Natonal Health Mission including RBSK.

56.9. Integrated Management of Neonatal and ChildhoodIllness- Facility (IMNCI-F)

56.10. Investigation of an Outbreak

57. Quality Assessment and Improvement

57.1.1. Point of Care Quality Improvement

B. Psychomotor Domain

- *Should be able to perform independently in the practice of Paediatrics, the following diagnostic and therapeutic interventions as listed below:*

1. Physical Examination

1.1. Measurement of Vitals

1.2. Measurement of Anthropometry

1.3. General physical examination

1.4. Physical Examination of Systems

1.5. Development (Screening) Assessment

1.6. Behavioral (Screening) Assessment

1.7. Sexual Maturity Assessment

1.8. Newborn Assessment including gestational assessments

1.9. Breastfeeding Assessment of Position and Attachment

1.10. Motor Disability Assessment

1.11. Autism Spectrum Disorder Screening

1.12. Fundus Examination

1.13. Middle ear examination

1.14. Throat examination

1.15 Triage – Rapid assessment of Airway, Breathing

1.16. Hand Hygiene

1.17. Biomedical Waste disposal guidelines

2. Non Invasive Monitoring

2.1. Pulse oximetry

2.2. Electrocardiogram

2.3. Vital Data Monitor

3. Procedures – Diagnostic

3.1. Informed Consent

3.2. Aseptic measures for all invasive procedures

3.3. Sampling

3.3.1. Venous blood

3.3.2. Arterial blood

3.3.3. Capillary blood

3.4. Vascular Access and cannulation

3.4.1. Intravenous – Peripheral

3.4.2. Intravenous - Central

3.4.3. Intraosseous

3.4.4. Intraarterial

3.4.5. Umbilical Vein

3.5. Diagnostic Taps

3.5.1. Pleural

3.5.2. Peritoneal

3.5.3. CSF

3.5.4. Pericardial

3.5.5. Joint fluid

3.5.6. Subdural

3.5.7. Ventricular

3.6. Urinary Catheterization

3.7. Urine collection

3.7.1. Mid-stream sampling

3.7.2. Catheter sampling

3.7.3. Suprapubic puncture

3.8. Tuberculin Skin Test

3.9. Antibiotic Test Dose

3.10. Feeding/Ryles Tube

3.10.1. Insertion

3.10.2. Gastric Aspiration

3.10.3. Feeds

3.10.4. Stomach wash

3.11. Respiratory

3.11.1. Naso, Pharyngeal and Nasopharyngeal swab collection

3.12. Suppository insertion

3.13. Per rectal exam

3.14. Inspection of Vulva/Vagina

3.15. Aspiration/Biopsy

3.15.1. Bone marrow

3.15.2. Liver

3.15.3. Kidney

3.15.4. FNAC Lymph node

3.16. Ultrasound – Lung (B line, Effusion), Circulation (IVC Volume), Vascular access (Central venous), Soft Tissue (Pus)

3.17. Blood Group/Type

3.18. Smears

3.18.1. Malaria Parasite Smear/Rapid Antigen Test

3.18.2. Peripheral Blood Smear

3.18.3. CSF/Pus Grams Stain

3.18.4. Sputum Ziehl Neilson Smear

3.19. Urine dipstick

3.20. Stool Hanging drop

3.21. Glucometer Blood Sugar

3.22. Shake test (Newborn gastric aspirate)

3.23. Electrocardiogram

3.24. Specific Screening/Assessment Tools

3.24.1. Gestation Assessments

3.24.2. Anthropometric measurements and Growth charting

3.24.3. Peak Flow Meter Measurement

3.24.4. HEADSS screening (Adolescence)

3.24.5. DDST screening (Development Assessment)

3.24.6. Assessment of Sexual Maturity using Tanner's

3.24.7. M-CHAT-R screening (Autism Assessment)

3.24.8. GMSCF Assessment of Motor Disability (Cerebral Palsy)

3.24.9. Pain assessment

4. Procedures – Therapeutic

4.1.Informed Consent

4.2.Prescriptions/Medication Orders

4.3.Neonatal Resuscitation Programincluding intubation

4.4.Basic Life Support

4.5.Advanced Paediatric Life Support including intubation

4.6.Heimlich, Foreign Body Removal

4.7.Exchange Transfusion

4.8.Stomach wash

4.9.Injections

4.9.1. Intravenous

4.9.2. Intramuscular

4.9.3. Subcutaneous

4.9.4. Intradermal

4.10. Infusions

4.10.1. IV bolus

4.10.2. Intravenous

4.10.3. Intraosseous

4.10.4. Blood Component Transfusion

4.11. Respiratory

4.11.1. Meter dose inhalation with or without Spacer/Mask

4.11.2. Nebulization

4.11.3. Airway Insertion – Nasopharyngeal, Oropharyngeal

4.11.4. Needle Cricothyroidotomy

4.11.5. Oxygen delivery methods

4.11.6. HFNC/CPAP/Non-Invasive Ventilation

4.11.7. Ventilation – Conventional

4.11.8. Intercostal drainage

4.11.9. Surfactant Administration (INSURE)

4.12. Spinal infusion/injection

4.13. Therapeutic Ascitic Tap

4.14. Peritoneal dialysis

4.15. Phototherapy

4.16. Incision and Drainage

4.17. Dressings

4.18. Sling

4.19. Transport onto and off stretcher

4.20. Neonatal Temperature Warm Chain Measures

- 4.20.1. Wrapping up Newborn
- 4.20.2. Kangaroo Mother Care

4.21. Immunization Cold Chain Measures

- 4.21.1. Refrigerator
- 4.21.2. Vaccine carrier

4.22. Restraining a child

4.23. Transporting a child

4.24. Early Interventional Therapy

4.25. Chest Physiotherapy

Milestones to be achieved on Psychomotor Skills through Year 1 to 3.

O-Observe PS-Perform under supervision PI-Perform ndependently

Milestones	1st Year	2nd Year	3rd Year
1. Physical Examination			
1.1. Measurement of Vitals	PI		
	PI		
1.2. Measurement of Anthropometry	PI		
1.4. Physical Examination of Systems	PI		
1.5. Development (Screening) Assessment	O, PS	PI	
1.6. Behavioral (Screening) Assessment	O	PS	PI
1.7. Sexual Maturity Assessment	O, PS	PI	
1.8. Newborn Assessment including gestational assessments	PI		
1.9. Breastfeeding Assessment	PI		
1.10. Motor Disability Assessment	O	PS	PI
1.11. Autism Spectrum Disorder Screening	O	PS	PI
1.12. Fundus examination	PI		
1.13. Middle ear examination	PI		
1.14. Throat examination	PI		
1.15. Triage - Rapid assessment of ABC	PI		
1.16. Hand hygiene	PI		
1.17. Biomedical Waste disposal guidelines	PI		
2. Non-Invasive Monitoring			
2.1. Pulse oximetry	PI		
2.2. Electrocardiogram	PI		
2.3. Vital Data Monitor	PI		
3. Procedures – Diagnostic			
3.1. Informed Consent	PI		

3.2. Aseptic measures for all procedures	PI		
3.3. Sampling			
3.3.1. Venous blood	PI		
3.3.2. Arterial blood	PI		
3.3.3. Capillary blood	PI		
3.4. Vascular Access and cannulation			
3.4.1. Intravenous – Peripheral	PI		
3.4.2. Intravenous - Central	O	PS	PI
3.4.3. Intraosseous	PI		
3.4.4. Intraarterial	O	PS	PI
3.4.5. Umbilical Vein	PI		
3.5. Diagnostic Taps			
3.5.1. Pleural	PS	PI	
3.5.2. Peritoneal	PI		
3.5.3. CSF	PI		
3.5.4. Pericardial	O	PS	PI
3.5.5. Joint fluid	O	PS	PI
3.5.6. Subdural	O,	PI	
3.5.7. Ventricular	O	PS	PI
3.6. Urinary Catheterization	PI		
3.7. Urine collection			
3.7.1. Mid-stream sampling	PI		
3.7.2. Catheter sampling	PI		
3.7.3. Suprapubic puncture	PI		
3.8. Tuberculin Skin Test	PI		
3.9. Antibiotic Test Dose	PI		
3.10. Feeding/Ryles Tube			
3.10.1. Insertion	PI		
3.10.2. Gastric Aspiration	PI		
3.10.3. Feeds	PI		
3.10.4. Stomach wash	PI		

3.11. Respiratory			
3.11.1. Naso, Pharyngeal, NP swab	PI		
3.12. Suppository insertion	PI		
3.13. Per rectal exam	O	PS	PI
3.14. Inspection of Vulva/Vagina	PI		
3.15. Aspiration/Biopsy			
3.15.1. Bone marrow	O,	PI	
3.15.2. Liver	O	PS	PI
3.15.3. Kidney	O	PS	PI
3.15.4. FNAC Lymph node	O	PS	PI
3.16. Ultrasound – Lung (B line,	O	O, PS	PS
3.17. Blood Group/Type	O,	PI	
3.18. Smears			
3.18.1. Malaria Parasite Smear/Rapid	O,	PI	
3.18.2. Peripheral Blood Smear	O,	PI	
3.18.3. CSF/Pus Grams Stain	O,	PI	
3.18.4. Sputum Ziehl Neilson Smear	O,	PI	
3.19. Urine dipstick	PI		
3.20. Stool Hanging drop	O,	PI	
3.21. Glucometer Blood Sugar	PI		
3.22. Shake test (Neon gastric aspirate)	PI		
3.23. Electrocardiogram	PI		
3.24. Specific Screening/Assessment			
3.24.1. Gestation Assessments	PI		
3.24.2. Anthropometric measurements	PI		
3.24.3. Peak Flow Meter Measurement	PI		
3.24.4. HEADSS screening	O,	PI	
3.24.5. DDST screening (Development	O,	PI	
3.24.6. Assessment of Sexual Maturity	O,	PI	
3.24.7. M-CHAT-R screening (Autism	O	PS	PI
3.24.8. GMSCF Assessment of Motor	O	PS	PI

3.24.9. Pain assessment	PI		
4. Procedures – Therapeutic			
4.1. Informed Consent	PI		
4.2. Prescriptions/Medication Orders	PI		
4.3. Neonatal Resuscitation Program	PI	PI (ET)	
4.4. Basic Life Support	PI		
4.5. Advanced Paediatric Life Support	PI	PI (ET)	
4.6. Heimlich, Foreign Body Removal	PI		
4.7. Exchange Transfusion	O	PS	PI
4.8. Stomach wash	PI		
4.9. Injections			
4.9.1. Intravenous	PI		
4.9.2. Intramuscular	PI		
4.9.3. Subcutaneous	PI		
4.9.4. Intradermal	PI		
4.10. Infusions			
4.10.1. IV bolus	PI		
4.10.2. Intravenous	PI		
4.10.3. Intraosseous	PI		
4.10.4. Blood Component Transfusion	PI		
4.11. Respiratory			
4.11.1. Meter dose inhalation with or	PI		
4.11.2. Nebulization	PI		
4.11.3. Airway Insertion – Nasophy,	PI		
4.11.4. Needle Cricothyroidotomy	O	PS	PI
4.11.5. Oxygen delivery methods	PI		
4.11.6. HFNC/CPAP/Non-Invasive	O,	PI	
4.11.7. Ventilation – Conventional, High	O	PS	PI (Not
4.11.8. Intercostal drainage	O,	PI	
4.11.9. Surfactant Administration	O,	PI	
(INSURE)			

4.12. Spinal infusion/injection	O	PS	PI
4.13. Therapeutic Ascitic Tap	O,	PI	
4.14. Peritoneal dialysis	O	PS	PI
4.15. Phototherapy	PI		
4.16. Incision and Drainage	O	PS	PI
4.17. Dressings	PI		
4.18. Sling	PI		
4.19. Transport onto and off	PI		
4.20. Neonatal Temperature Warm	PI		
4.20.1. Wrapping up Newborn	PI		
4.20.2. Kangaroo Mother Care	PI		
4.21. Immunization Cold Chain			
4.21.1. Refrigerator	PI		
4.21.2. Vaccine carrier	PI		
4.22. Restraining a child	O,	PI	
4.23. Transporting a child	O,	PI	
4.24. Early Interventional Therapy	O	PS	PI
4.25. Chest Physiotherapy	O,	PI	

C. Predominant in Affective Domain

Should be able to effectively and empathetically……..

1. Communication – Child/Attender/Guardian

1.1. Elicit a relevant and appropriate history from an attender /child including family and support systems

1.2. Engage and explains in appropriate language the plan (diagnostic and management including economics of plans) to an attender/child

1.3. Explain the prognosis of the child's condition

1.4. Educate a Parent, an attendant/guardian/child with regards disease/, cultural, and spiritual understanding associated with health care delivery complication prevention, health promotion, and management keeping illustrating ethical ---?

1.5. Counsel towards an Informed Consent/Assent

1.6. Communicate disturbing/bad news including death

1.7. Demonstrates communication skills to appropriately word reports, professional opinions, patient education and counseling with regards

1.7.1. Health and Disease condition with management plan

1.7.2. Nutrition - Breastfeeding, complimentary feeding and nutrition using a Growth chart

1.7.3. Immunization – On schedule, catch up including costs and advantages/disadvantages

1.7.4. Lifestyle

1.7.4.1. Dietary

1.7.4.2. Habits

1.7.5. Genetic risks of relevant inherited conditions

1.7.6. Options for management and future approach in care with advantages and disadvantages

1.7.7. Rights and responsibilities

1.8. Demonstrates knowledge or applies an understanding of psychological, social, and economic factors which are pertinent to the delivery of health care.

1.9. Demonstrates and effectively engages the patient and / or family in all communication.

1.10. Demonstrates ability to provide patient, family and community education through written material especially simple patient information leaflets

Should be able to effectively and respectfully……..

2. Communication – Health Team members

2.1. Communicate with all members of the health care team

2.2. Communicate with other members of the profession

2.3. Communicate with allied professionals associated with Health care

Should be able to ……..

3. Professionalism and Ethical Behaviour

3.1**.** Demonstrates Professional Conduct in patient care and research

3.1.1. Demonstrate respect for the Doctor-Patient relationship

3.1.2. Demonstrate respect for the Doctor-Health Care Team Member relationship

3.1.3. Demonstrateadherence to confidentiality and patient privacy in all communications in and outside the place of work.

3.1.4. Demonstrate respect of a patient's rights and decisions including the right to information and second opinion.

3.1.5. Demonstrate behaviour aligned with MCI/NMC code of ethics in all related dealings

3.1.6. Demonstrates personal and social responsibility/accountability in the provision ofhealth care at an individual, community and population level

3.1.7. Demonstrate an awareness of economic costs of health care in all dealings with patients.

3.1.8. Demonstrate adherence to research ethics guidelines in the conduct of patient related research.

3.1.9. Demonstrates work ethics while working in a health care team.

3.1.10. Demonstrates truthfulness, honesty and integrity in all interactions.

3.1.11. Provides care that surpasses personal beliefs and prejudices

3.1.12. Demonstrates appropriate etiquette in dealings with patients, relatives and other health personnel

3.2. Demonstrates behavior that is Ethical and bound by the Law of the land

3.2.1. RecognizesEthical conflicts and dilemmas seeking solutions to reduce conflicts and do the right thing.

3.2.2. Complies with legal requirements while dealing with child health and includes issues dealing with the Industry Conflict, MTP Act,PCPNDT act, Child Abuse, Child labour, Legal adoption, Consent and Assent.

D. Pedagogic and Research Skills

Should be able to effectively ……..

1. Pedagogic Skills

1.1. Conduct a small group learning session (Theory and Practical) using appropriate tools

1.2. Create and use an effective Powerpoint Presentation

1.3. Present to a large group

Should be able to effectively ……..

2. Research Skills

2.1. Search scientific literature and critically appraise the evidence using standard study design checklists enabling application to clinical care.

2.2. Justify the application of the findings of a research study in clinical practice (Diagnostic and Therapeutic Studies)

2.3. Develop a research hypothesis supported by scientific literature review, design an appropriate study, implement the methodology, generate results by analyzing data, and draw appropriate conclusions.

2.4. Should be able to present or/and publish a paper based on the conducted research.

TEACHING AND LEARNING METHODS

General principles

Acquisition of competencies being the keystone of doctoral medical education, such training should be skills oriented. Learning in the program, essentially autonomous and self-directed, and emanating from academic and clinical work, shall also include assisted learning. The formal sessions are meant to supplement this core effort.

All students joining the postgraduate (PG) courses shall work as full-time (junior) residents during the period of training. One shall be able to appear in the examination if one has 80% (eighty per cent) of the attendance. and participating in all assignments and facets of the educational process. They shall maintain a logbook for recording the training they have undergone, and details of the procedures done during laboratory and clinical postings in real time.

This should include a judicious mix of demonstrations, symposia, journal clubs, clinical meetings, seminars, small group discussion, bed-side teaching, case-based learning, simulation-based teaching, self-directed learning, integrated learning, interdepartmental meetings and any other collaborative activity with the allied departments. Methods with exposure to the applied aspects of the subject relevant to basic/clinical sciences should also be used. **The suggested examples of teaching-learning methods are given below but are not limited to these.**

A. Lectures: Didactic lectures should be used sparingly. A maximum of 10 lectures per year in the concerned PG department is suggested. All postgraduate trainees are encouraged to attend such lectures. Lectures can cover topics such as:

1. Subject-related important topics as per Paediatric requirements
2. Recent advances
3. Research methodology and biostatistics
4. Undergraduate/Postgraduate medical curriculum
5. Teaching and assessment methodology.

Topic numbers 3, 4, 5 can be done during research methodology/biostatistics and medical education workshops in the institute.

B. Journal club: Minimum of once in 1- 2 weeks is suggested.

Topics will include presentation and critical appraisal of original research papers published in peer reviewed indexed journals. The presenter(s) shall be assessed by faculty and grades recorded in the logbook.

C. Student Seminar: Minimum of once in 1-2 weeks is suggested.

Important topics should be selected as per subject requirements and allotted for in-depth study by a postgraduate student. A teacher should be allocated for each seminar as faculty moderator to help the student prepare the topic well. It should aim at comprehensive complete evidence-based review of the topic. The student should be graded by the faculty and peers. Symposium, Colloquium and Seminars may overlap to enhance involvement and active participation of postgraduates.

D. Student Symposium: Minimum of once every 3 months.

A broad topic of significance should be selected, and each part shall be dealt by one postgraduate student. A teacher moderator should be allocated for each symposium and moderator should track the growth of students. The symposium should aim at an evidence-based exhaustive review of the topic. All participating postgraduates should be graded by the faculty and peers. Symposium, Colloquium and Seminars may overlap to enhance involvement and active participation of postgraduates.

E. Bedside clinics: Minimum - once a week.

Clinics/bedside teaching should be coordinated and guided by faculty from the department. Various methods like DOAP (Demonstrate, Observe, Assist, Perform), simulations in skill lab, and case-based discussions etc. are to be used. Faculty from the department should participate in moderating the teaching-learning sessions during clinical rounds.

F. Interdepartmental colloquium

Faculty and students must attend monthly meetings between the main Department and other department/s on topics of current/common interest or clinical cases. Symposium, Colloquium and Seminars may overlap to enhance involvement and active participation of postgraduates.

G. Attendance at Scientific meetings, CME programmes / Workshop

Period of Training

The period of training for the award of various post-graduate degrees and diplomas shall be as per Chapter-II.

Training Programme

i. Post-graduate training shall consist of training of the students through lectures, seminars, journal clubs, group discussions, participation in laboratory and experimental work, involvement in research, clinical meetings, grand rounds, clinicopathological conferences, practical training in the diagnosis and medical and surgical treatment, training in the basic medical sciences as well as in allied clinical specialties, etc. as per the requirement of Speciality training. Specialities where patient treatment is involved the teaching and training of the students, shall include graded responsibility in the management and treatment of patients entrusted to their care.

ii. All post-graduate students will work as full-time resident doctors. They will work for reasonable working hours and will be provided reasonable time for rest in a day.

iii. All broad-speciality and super-speciality students will do thesis related research and will write thesis.

iv. Every institution undertaking post-graduate training programme shall set up an Academic Cell, under the Chairmanship of a senior faculty member, who shall monitor the implementation of training programmes in each speciality and ensure its quality as mandated by the PGMEB.

v. The training programmes shall be updated as and when required while keeping in mind the curriculum requirements and other relevant requirements prescribed by PGMEB from time to time. The structured training programme shall be written and strictly followed, to enable the examiners to determine the training undergone by the candidates.

vi. Post-graduate students of broad degree courses shall maintain a dynamic e-log book which needs to be updated on a weekly basis about thework being carried out by them and the training programme undergone during the period of training. Provided that M.S. /M.Ch students shall mandatorily enter details of surgical procedures assisted or done independently.

vii. It shall be the duty of the Post-graduate guide imparting the training to assess and

authenticate monthly the record (e-Log) books.

viii. The post-graduate students shall essentially be required to participate in the teaching and training programme of undergraduate students and interns.

ix. During the training for award of Degree/Diploma, there shall be proper training in basic medical sciences related to the disciplines concerned. During the training programmes emphasis has to be laid on preventive and social aspects. All post-graduate medical college/institution shall have facilities for teaching the basic science subjects as per guidelines.

x. A post-graduate student of a degree course in broad specialty/super specialty will do at least one of the following to make him/her eligible to appear in his/her final examination:

a. Post presentation at a National/Zonal/State conference of his/her speciality;

b. Podium presentation at a National/Zonal/State conference of his/her speciality;

c. Have one research paper published/accepted for publication in journal of his/her speciality as first author.

xi. **Course in Research Methodology**

a. All post-graduate students shall complete an online course in Research Methodology.

b. The students shall have to register on the portal of the designated training institutions.

c. The students are expected to complete the course in the first year.

d. The online certificate generated on successful completion of the course and examination thereafter, will be acceptable evidence of having completed this course.

e. The above certification shall be a mandatory requirement to be eligible to appear for the final examination of the respective post-graduate course.

f. This requirement shall be applicable for all post-graduate students.

xii. **Course in Ethics**

a. All post-graduate students shall complete course in ethics including Good Clinical Practices and Good Laboratory Practices, whichever is relevant to them, to be conducted by institutions/Universities.

b. The students are expected to complete the course in the first year.

c. No post-graduate student shall be permitted to appear in the examination without the above certification.

xiii. **Course in Cardiac Life Support Skiils**

a. All post-graduate students shall complete a course in Basic Cardiac Life Support (BCLS) to be conducted by the institution and Paediatric Advanced Life Support (PALS).

b. The students are expected to complete the course in the first year.

c. No post-graduate student shall be permitted to appear in the examination without the above certification.

xiv. Others - Institutions may arrange training in any other courses like awareness in medical audit, medical law exposure to human behavior studies, finance, accounts etc, which are beneficial to the post graduate students.

H. a. Rotational clinical / community / institutional postings

Final decision that determines "external" postings outside the primary department will differ according to department needs, feasibility, sub-speciality availability and accessibility. Apart for mandatory postings, 'external' postings listed below are highly recommended (desirable) to expose postgraduates to allied Pediatric sub-specialities given existing trends in practice. Specific Learning Outcomes need to be defined for each of these postings even assessed keeping in mind the Competency based curriculum and their future professional roles as Pediatricians.

Rotations are listed below:

a. Mandatory Postings

- Paediatric emergency (minimum 1 month a year)
- Neonatology (NICU) (minimum 3 months a year)
- Intensive Care (PICU) (minimum 2 months a year)
- District Residency Programme with participation in Community Outreach Child Health Programs (at least 3 months over the entire course; 3rd or 4th or 5th semester; See Section G-b below).

Desirable postings based on need, availability, accessibility, and feasibility and may be innovatively integrated into schedule of posting to optimize learning experiences.

Subspecialities Outpatient Clinics / observing- assisting in emergency clinical

- Child Psychiatry
- Pediatric Surgery
- Developmental Pediatrics
- Pediatric Nephrology
- Pediatric Hemato-oncology
- Pediatric Cardiology
- Pediatric Gastroenterology
- Pediatric Rheumatology/Immunology/Allergy
- Genetic
- Pediatric Pulmonology
- Pediatric Dermatology
- Pediatric Endocrinology
- Adolescent Health
- DOTS, PPTCT, ART center with pediatric exposure
- Microbiology diagnostic Lab
- Radiology including CT/MRI
- Forensic Medicine especially Child related
- Neuro-rehabilitation (PMR, Physiotherapy, Occupational Therapy)

b. Posting under "District Residency Programme" (DRP):

I. Preamble: Doctors have to be trained in diverse settings including those which are close to the community. Hence, they should be trained in the District Health System / the District Hospitals. Provided that in respect of M.D./M.S. students admitted with effect from academic session 2021, the training imparted as part of the District Residency Programme, shall be considered as training imparted in a medical institution.

II. Objectives: The main objectives of the District Residency Programme (DRP) would be:

a. To expose the post-graduate student to the District Health System/ District Hospital and involve them in health care services being provided by District Health System /District Hospital for learning while serving;

b. To acquaint them with the planning, implementation, monitoring, and assessment of outcomes of the National Health programmes at the district level.

c. To orient them to promotive, preventive, curative and rehabilitative services being provided by various categories of healthcare professionals under the umbrella of the National Health Mission.

In doing so, the post-graduate medical students would also be contributing towards strengthening of services of the District Health System as Speciality resident doctors working as members of the district teams.

III. Definition of District Hospital: For the purpose of this programme, a District Hospital shall be a functional public sector/government-funded hospital of not less than 50 beds with facilities/staff for the designated specialties at that level/facility. Any post-graduate medical institution or a super-speciality hospital will not be considered as district hospital.

IV. Definition of District Health System: For the purpose of this programme, the District Health System shall include all public sector/government-funded hospitals and facilities (including community health centres, primary health centres, sub-health centres, urban health centres, etc.), as well as community outreach system in a district. This would also include district system engaged in running respective public health services including the implementation of national and state public health programmes.

V. **District Residency Programme:** All post-graduate students pursuing M.D./M.S. in broad specialties in all medical colleges/institutions under the purview of the National Medical Commission shall undergo a compulsory residential rotation of three months in District Hospitals/ District Health System as a part of the course curriculum. Such rotation shall take place in the 3rd or 4th or 5th semester of the post graduate programme. In the case of those students who have taken admission after completion of the Diploma in the relevant Speciality, the District Residency Programme shall take place in the third semester only. Similarly, the post-graduate diploma students shall undergo the District Residency Programme in the third semester.

This rotation shall be termed as 'District Residency Programme' (DRP) and the post-graduate medical student undergoing training shall be termed as a 'District Resident'.

VI. **Training and Responsibilities of District Residents**: The District Resident will work under the overall directions and supervision of the District Residency Programme Coordinator (DRPC).

During this rotation, the Resident doctor will be posted with the concerned/allied Speciality team/unit/ sections/services at the District Health System/ District Hospital. The clinical responsibilities assigned to the Residents would include serving in outpatient, inpatient, casualty, and other areas pertaining to their Speciality and encompass night duties.

Post-graduate students of specialities where direct patient care is not involved will be trained by District Health System/ District Hospital teams within the available avenues in coordination with the District Health Officer/Chief Medical Officer. They would be trained in and contribute to the diagnostic/laboratory services, pharmacy services, forensic services, general clinical duties, managerial roles, public health programmes etc., as applicable. They may also be posted in research units / facilities, laboratories and field sites of the Indian Council of Medical Research and other national research organizations.

VII. **Stipend and Leave for District Residents:** The District Residents shall continue to draw full stipend from their respective medical colleges for the duration of the rotation subject to the attendance record submitted by the appropriate district authorities to the parent medical college/institution, based on methods and system as prescribed. Subject to exigencies of work, the District Resident will be allowed

one weekly holiday by rotation. They shall also be entitled to leave benefits as per the rules/ guidelines of the parent college/university.

VIII. Training during DRP and Certification thereof:

a. Quality of training shall be monitored by log books, supportive supervision, and continuous assessment of performance. The attendance and performance of District Residents shall be tracked by the District Residency Programme Coordinator (DRPC) of the district concerned, as well as the parent Medical College through an appropriate electronic/digital or mobile enabled system. Such monitoring systems shall also be accessible to the State/Union Territory Steering Committee and the National Coordination Cell.

b. The District Residents would remain in contact with their designated post-graduate teachers and departments at their parent Medical College / Institution by phone and e-communication for guidance, learning, and for being able to participate remotely in scheduled case discussions, seminars, journal clubs, thesis discussion, etc. and other academic activities.

c. Satisfactory completion of the District Residency shall be an essential condition before the candidate is allowed to appear in the final examination of the respective post-graduate course

d. The District Residency Programme Coordinator (DRPC) shall issue certificate of satisfactory completion of DRP and report on the performance of the District Resident on a prescribed format to be decided by the PGMEB to the concerned medical college and the Govt. of the State/UT.

IX. Responsibility of Medical College/Medical Institution: It shall be incumbent upon all medical colleges/ institutions to place the post-graduate students at the disposal of the Government of concerned State/Union Territory for the District Residency Programme. The faculty of the concerned departments would provide guidance to the District Residents by phone/e-communication in accordance with Section 5.2.VI and VIII.

I. Teaching research skills

Writing a thesis should be used for inculcating research knowledge and skills. All postgraduate students shall conduct a research project of sufficient depth to be presented to the University as a postgraduate thesis under the supervision of an eligible faculty member of the department as guide and one or more co-guides who may be from the same or other departments.

In addition to the thesis project, every postgraduate trainee shall participate in at least one additional research project that may be started or already ongoing in the department. It is preferable that this project will be in an area different from the thesis work. For instance, if a clinical research project is taken up as thesis work, the additional project may deal with community/field/laboratory work. Diversity of knowledge and skills can thereby be reinforced. There should be periodic department review of the thesis work, as per following schedule:

- End of 6 months — Submission of protocol
- During 2ndyear — Mid-term presentation
- 6 months prior to — Final presentation;
  - 3 months before university examination — Submission
  -

J. Training in teaching skills

MEU/DOME should train PG students in education methodologies and assessment techniques. The PG students shall conduct UG classes in various courses and a faculty shall observe and provide feedback on the teaching skills of the student.

3 months before examination

K. Log book

During the training period, the postgraduate student should maintain a Log Book indicating the duration of the postings/work done in Wards, OPDs, Casualty and other areas of posting. This should indicate the procedures assisted and performed and the teaching sessions attended. The logbook entries must be done in real time. The logbook is

thus a record of various activities by the student like: (1) Overall participation & performance, (2) attendance, (3) participation in sessions, (4) record of completion of pre-determined activities, and (5) acquisition of selected competencies.

The purpose of the Log book is to:

a) help maintain a record of the work done during training,
b) enable Faculty/Consultants to have direct information about the work done and intervene, if necessary,
c) provide feedback and assess the progress of learning with experience gained periodically.

The Logbook should be used in the internal assessment of the student, should be checked and assessed periodically by the faculty members imparting the training. The PG students will be required to produce completed logbook in original at the time of final practical examination. It should be signed by the Head of the Department. A proficiency certificate from the Head of Department regarding the clinical competence and skillful performance of procedures by the student will be submitted by the PG student at the time of the examination.

The PG students shall be trained to reflect and record their reflections in logbook particularly of the critical incidents. Components of good teaching practices must be assessed in all academic activity conducted by the PG student and at least two sessions dedicated for assessment of teaching skills must be conducted every year of the PG program. The teaching faculty are referred to the MCI Logbook Guidelines uploaded on the Website.

L. Course in Research Methodology: All postgraduate students shall complete an NMC recognized course in Research Methodology within six months of the commencement of the batch and generate the online certificate on successful completion of the course.

Other aspects

- The Postgraduate trainees must participate in the teaching and training program of undergraduate students and interns attending the department.

- Trainees shall attend accredited scientific meetings (CME, symposia, and conferences) at least once a year.
- Department shall encourage e-learning activities.
- The Postgraduate trainees should undergo training in Basic Cardiac Life Support (BCLS), Neonatal Resuscitation and Advanced Pediatric Life Support (PALS)
- The Postgraduate trainees must undergo training in information technology and use of computers.

During the training program, patient safety is of paramount importance; therefore, relevant clinical skills are to be learnt initially on the models, later to be performed under supervision followed by independent performance. For this purpose, provision of skills laboratories in medical colleges is mandatory.

ASSESSMENT

The medical college/institution will conduct the Formative Assessment (examination) and the University will conduct the Summative Assessment (examination). Both Formative Assessment (examination) and Summative Assessment (examination) shall consist of Theory, Clinical/Practical and Viva Voce. The university shall conduct not more than two examinations in a year, for any subject, with an interval of not less than 4 and not more than 8 months between the two examinations

FORMATIVE ASSESSMENT ie., assessment to improve learning

Formative assessment should be continual and should assess medical knowledge, patient care, procedural & academic skills, interpersonal skills, professionalism, self- directed learning and ability to practice in the system.

General Principles

Internal Assessment should be frequent, cover all domains of learning and used to provide feedback to improve learning; it should also cover professionalism and communication skills.

The Internal Assessment should be conducted in theory and practical/clinical examination, should be frequent, cover all domains of learning and used to provide feedback to improve learn

For Knowledge Assessments, *Patient case scenario presentations and discussions including interdepartmental sessions remain the cornerstone of Paediatric learning focused on critical thinking and clinical reasoning. This is also ideally achieved during teaching at the bedsides on rounds and in ambulatory settings such as outpatient clinics if not emergency. Clinical Pathologic Case discussions, Mortality-Morbidity discussions and Prescription-Medication Order Audits are of great value and are encouraged to improve quality of care as well teaching-learning preferably scheduled every month to routine educational programme*

For Psychomotor and Affective/Communication Assessments*, consider the use of OSCEs, DOPs and even mini-CEX that one may strengthen Formative*

Feedback/Assessments.

The student to be assessed periodically as per categories listed in appropriate (non-clinical/clinical) postgraduate student appraisal form (Annexure I)

FORMATIVE ASSESSMENT FOR POST GRADUATES

Theory:

Annual theory examination would be conducted for all the batches of postgraduate students with year wise portion.

Monthly theory exam also would be conducted once in two to three months and feedback would be given accordingly.

Practicals:

Annual practical examination would be conducted for all the batches of postgraduate students. Case allotment except for the first year for whom OSCE Stations would be conducted

Monthly OSCE with immediate feedback.

SUMMATIVE ASSESSMENT ie., assessment at the end of training.

Eligibility Criteria for appearing for University Examination:

The PGs have submitted the proof of eligibility as per new PGMER-2023 guidelines

- Publication/paper /poster in the National/Zonal/State conferences.
- Course in Ethics attendance certificate.
- BLS & PALS certificate.
- DRP Completion certificate
- Basic course in Biomedical Research certificate by ICMR Swayam
- Research Methodology Workshop certificate
- Submission of thesis and Write up of the dissertation in the publication format.
- Cumulative attendance of 80% in 3 years.

Theory examination

The examinations shall be organized based on 'Grading' or 'Marking system' to evaluate and to certify post graduate student's level of knowledge, skill and competence at the end of the training, as given in the latest POSTGRADUATE MEDICAL EDUCATION REGULATIONS.

The examination for M.D./ M.S shall be held at the end of 3rd academic year.

There shall be 4 theory papers (as per PG Regulations).

Paper I: Basic Sciences as related to the subject

Paper II: General Paediatrics

Paper III: Systemic Paediatrics

Paper IV: Recent Advances

Practical/clinical and Oral/viva voce examination

Practical examination

Practical examination should be as per concerned university regulation.

Oral/Viva voce examination shall be comprehensive enough to test the post graduate student's overall knowledge of the subject focusing on psychomotor and affective domain.

The final clinical examination in broad specialty clinical subjects should include:

- Cases pertaining to major systems (eg. one long case and three short cases)
- OSCE Stations to cover clinical, procedural and communication skills
- Logbook Records and reports of day-to-day observation during the training
- It is emphasized that Oral/viva voce examination shall be comprehensive enough to test the post graduate stu overall knowledge of the subject.

8.1 Examinations.

8.2 Examiners: a. The examiner (both internal and external) for the post-graduate examination in Broad and Super Specialties shall have three years' experience as recognised Post-graduate Guide in the concerned subject. b. The minimum number of examiners for post-graduate examination shall be four. Out of which, at least two shall be external examiners and least one of them shall be from different university outside the state. c. 8.3 A. An examiner shall not be appointed for more than two consecutive regular examinations for the same institution.

8.3. Methodology Broad Specialties: Doctor of Medicine (M.D.)/Master of Surgery (M.S.): M.D./M.S. examinations, in any subject shall consist of theory papers, and clinical/practical and viva voce examinations. a. Theory: The theory examination (both formative and summative) may be of descriptive answer of a question type, Multiple Choice Question (MCQ) type or mix of both types. Theory examination for summative examination shall be of four theory papers. The first and the fourth paper shall be on basic medical science and recent advances, respectively. The theory examination shall be held well in advance before the clinical and practical examination.

b. Clinical/Practical and viva voce b. Clinical/Practical and viva voce

I. Clinical examination for the subjects in clinical sciences shall be conducted to test the knowledge and competence of the candidates for undertaking independent work as a consultant/specialist/teacher, for which candidates shall be examined for one long case and two short cases.

II. Practical examination for other subjects shall be conducted to test the knowledge and competence of the candidates for making valid and relevant observations based on the experimental/ laboratory studies and his ability to perform such studies as are relevant to his subject.

III. The viva voce examination shall be thorough and shall aim at assessing the candidate's knowledge and competence about the subject, investigative procedures, therapeutic technique and

other aspects of the Speciality.

IV. Clinical/practical examination shall include Objective Structured Clinical Examination (OSCE).

8.4 Valuation:

a. All the teachers of the other colleges of the concerned University or other Universities, who are eligible to be post-graduate examiners, can perform the valuation of the answer scripts.

b. All the answer scripts shall be subjected for two valuations by the concerned University. The average of the total marks awarded by the two valuators for the paper, which is rounded off to the nearest integer (whole number), shall be considered for computation of the results. All the answer scripts, where the difference between two valuations is 15% and more of the total marks prescribed for the paper, shall be subjected to third valuation. The average of the best two total marks, awarded by the three evaluators for the paper, rounded off to the nearest integer (whole number), shall be considered for final computation of the results.

c. After the computation and declaration of the results, under no circumstances, revaluation is permitted.

d. All the Health Universities/Institutions imparting post-graduate courses shall implement digital valuation.

CRITERIA FOR EVALUATION OF M.S./M.D./M.Ch./DM COURSES

S.No.	**Description**	**M.S./M.D./M.Ch./DM Courses**
1	**THEORY**	
	No. of Theory Papers	4
	Marks for each Theory Paper	100
	Total marks for Theory Paper	400
	Passing Minimum for Theory	200/400 (40% minimum in each paper)

2	**PRACTICAL/CLINICAL**	300
3	**VIVA VOCE**	100
	Passing minimum for Practical/Clinical including Viva voce	200/400
	Long Case/Exercises (1 Case) Short Case/Exercises (2 Cases) OSCE/OSPE Dissertation Viva **Subtotal of Clinical/Practical** Viva Voce **Grand Total**	120 120 40 20 **300** 100 **400**
	The candidate shall secure not less than 50% marks in each head of passing which shall include 1. Theory – aggregate 50% (In addition, in each Theory paper a candidate has to secure minimum of 40%) 2. Practical/Clinical and Viva voce - aggregate 50% 3. If any candidate fails even under one head, he/she has to re-appear for both Theory and Practical/Clinical and Viva voce examination. 4. Five per cent of mark of total marks of Clinical/Practical and Viva Voce marks (20 marks) will be of dissertation/thesis and it will be part of clinical/practical examination marks. **External examiner outside the state will evaluate dissertation/ thesis and take viva voce on it and marks will be given on quality of dissertation/thesis and performance on its viva voce.** 5. No grace mark is permitted in post-graduate examination either for theory or for practical.	

RECOMMENDED READING: Books (latest edition)

1. Nelson Textbook of Pediatrics, Ed: Kliegman RM, St. Geme J. Elsevier.
2. PG Textbook of Pediatrics, Ed: Gupta P, Menon PSN, Ramji S, Lodha R. Jaypee
3. Rudolph's Pediatrics, Ed: Kline MW, McGraw Hill.
4. Textbook of Clinical Neonatology (IAP/NNF), Ed: Pejavar RK, Thakre R. Paras.
5. Cloherty and Stark's Manual of Neonatal Care. Ed: Eichenwald EC, Hansen AR, Martin CR, Stark AR. Wolters Kluwer.
6. Principles of Pediatric& Neonatal Emergencies (IAP). Ed: Gupta P, Bagga A, Ramji S, Chugh K, Lodha R, Dewan P, Kaushik JS, Shah D. Shah. Jaypee.
7. Clinical Methods in Pediatrics. Gupta P. CBS Publisher.
8. The Harriet Lane Handbook. Hughes HK, Kahl LK, Elsevier.
9. Nutrition and Child Development. Elizabeth KE. Paras Medical Publisher.
10. Illingworth's Development of The Infant and The Young Child. Au: Illingworth RS; Elsevier Health.
11. Fenichel's Clinical Pediatric Neurology. Au: Piña-Garza JE, James KC. Elsevier.
12. Park's Pediatric Cardiology for Practitioners. Myung Park M, Salamat M. Elsevier.
13. Lanzkowsky's Manual of Pediatric Hematology and Oncology. Fish J, Lipton J, Lanzkowsky P. Elsevier.
14. Essential Paediatric Pulmonology. Lodha R, Kabra SK. Jaypee.
15. Textbook of Pediatric Rheumatology. Petty RE, Laxer R, Lindsley C, Wedderburn L, Fuhlbrigge RC, Mellins ED. Elsevier.

Journals

03-05 international Journals and 02 national (all indexed) journals.

Online Resources

a. IAP https://www.iapindia.org/https://diapindia.org/
b. GOI MOHFW and IIPS. http://rchiips.org/nfhs/
c. Pubmed. https://pubmed.ncbi.nlm.nih.gov/
d. Google Scholar. https://scholar.google.co.in/
e. Cochrane. https://www.cochranelibrary.com/
f. Uptodate. https://www.uptodate.com/login

g. Clinical Key. https://www.clinicalkey.com/#!/login h.

Medscape. https://www.medscape.com/

i. JM Rey's IACAPAP e-Textbook of Child and Adolescent Mental Health.

Rey JM, Martin A. International Association for Child and Adolescent Psychiatry and Allied Professions. ISBN 9780646574400 Free on https://iacapap.org/english

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ANNEXURES

Blueprint of Question Paper

Paper I: Applied basic medical sciences related to Pediatrics

Sl. No.	Discipline	Topics	Weightage	Marks Allotted	No. of
1.	Anatomy	Embryogenesis, applied anatomy (Congenital Anomaly) & Medical genetics, Principles of inheritance, chromosomal disorders, single gene disorders, multifactorial / polygenic disorders.	20%	20	2
2.	Biochemistry	Biochemical basis for diseases in children Normal biochemical pathways. Bilirubin Metabolism Inborn errors of metabolism, Basics of nutrition	10%	10	1
3.	Physiology	Applied Physiology with regard to major organ systems Fetal and neonatal circulation; regulation of temperature, blood pressure, acid base balance, Fluid electrolyte balance and calcium metabolism. . Renal function Hepatic function	20%	20	2
4.	Pharmacology and allergy	Clinical Pharmacology, Therapeutics of childhood diseases, drug interactions, Rational drug therapy, Adverse Drug Reactions, Pharmacokinetics of common drugs.. Principles of drug therapy	10%	10	1
5.	Microbiology	Clinical Microbiology applied to investigations for diseases in childhood, serology, staining, and cultures Virology Bacteriology Mycology Parasitology (Protozoology and Helminthology) with respect to Classification , Diagnostics , Therapeutics and .	10%	10	1

6.	Pathology	Pathologysiology Pathogenesis of diseases in children and Hematology, & Haemao poiesis, Hemostacis, basic histopathology	10%	10	1
7.	Biostatistics	Biostatistics, clinical epidemiology, Medico legal & Ethical issues	10%	10	1
8.	Immunology including vaccination	Immune response system . Immunoglobulins Complement Hypersensitivity reactions Immunological assays Science of Vaccinology Transplant Immunology	10%	10	1

Paper II: General Paediatrics

Sl. No.	Section	Topics	Weightage	Marks Allotted	No. of Question
1.	Neonatology	Preventive neonatology Neonatal emergencies Diseases of newborn	50%	50	5
2.	Community and social pediatrics	, Rights of the child, Adoloscent Health	30%	30	3
3.		National health programs related to child health, IMNCI			
4.		Rationale and methodology of pulse polio immunization			
5.		Child labour, abuse neglect, Adaption			
6.		Disability and rehabilitation,			
7.		National policy of child health and population, Juvenile delinquency			
8.		Principles of prevention, control of infections (food, water, soil, vector borne			
9.		Investigation of an epidemic			

10.	Growth & Development	Growth, Growth Charts, Development, Puberty, Disorders of behavior and development	10%	10	1
11.	Nutrion/Immuno defiency	Protein energy malnutrition including SAM and MAM, vitamin and minerals deficiency	10%	10	1

Paper III: Systemic Paediatrics

Sl. No.	**Section**	**Topics**	**Weightage**	**Marks Allotted**	**No. of Question**
1.	Cardiovascular	Including emergency conditions in the	10%	10	1
2.	Respiratory	Including emergency conditions in the respective systems	10%	10	1
3.	Gastrointestinal including liver and Hepatobiliary system	Including emergency conditions in the respective systems	10%	10	1
4.	Central nervous system / Neuro muscular disorder	Including emergency conditions in the respective systems	10%	10	1
5.	Hematology/Oncology	Including emergency conditions in the respective systems	10%	10	1
6.	Nephrourology	Including emergency conditions in the respective systems	10%	10	1
7.	Endocrinology	Including emergency conditions in the respective systems	10%	10	1

8.	Bones and Joints / Rheumatology Skin/Eye/ENT	Including emergency conditions in the respective systems	10%	10	1
9.	Surgical problems in children	Including emergency conditions in the respective systems	10%	10	1
10.	Infections		10%	10	1

PaperIV: Recent Advances

Sl. No.	Section	Topics	Weightage	Marks Allotted	No. of Question
1.	Recent advances in Hematology/ Nephrology Endocrinology Central nervous system	Newer diseases Newer Investigations & Treatment	20%	20	2
2.	Newer drugs, therapeutic advances like transplantation, Renal replacement therapy, Application of genetics in Pediatrics in Prenatal/Postnatal diagnosis and therpeutic considerations Molecular diagnostics.Recombinant DNA Technology applications		20%	20	2
3.	Recent Advances in Cardiovascular including 3D echocardiography Respiratory, Gastrointestinal system	Newer diseases Newer Investigations & Treatment	20%	20	2

4.	Recent Advances in Oncology, Neuro muscular disorder, liver & Hepatobiliary system, Fetal medicine Infections Telemedicine	Newer diseases Newer Investigations & Treatment	10%	10	1
5.	Recent advances in neonatology	In diagnosis and treatment	10%	10	1
6.	Emergencies in children (General like anaphylaxis, drowning, burns, hypoglycemia, rapid sequence intubation, airway management, Scoring systems in PICU, Sedation analgesia in PICU, Procedures and drugs in PICU Poisonings and toxicology including snake & scorpion bite		10%	10	1
7.	Specilased emergency and intensive care for paedtrics / Ventilation- invasive and non- invasive/ Immunothearpy/ Artificial intelligence/collaborative health care models.		10%	10	1

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MODEL QUESTION PAPER

SUBJECT: Paper I: Applied basic medical sciences related to Pediatrics

1. Discuss factor affecting calcium and phosphorous metabolism. How you will manage cases of hypocalcaemia in pediatric patients?
2. Describe thyroid hormone synthesis. How you will manage and monitor congenital hypothyroidism.
3. Describe the Malaria parasite life cycle. How will you manage uncomplicated malaria?
4. How does the upper airway of a child differ from that an adult? Discuss the diagnosis and treatment of acute epiglotitis.
5. Enumerate the uses of zinc in children. Describe its mechanism of action and advantages in acute diarrheal disease in under five children.
6. What are the clinical importance of bone age assessment in children? How will you assess the bone age of a 10 year old male child?
7. Outline the development of cardiovascular system. Discuss the hemodynamic clinical picture and management of ventricular septal defect.
8. Describe the role of kidney in regulation of acid base balance.
9. What is the embryological basis of Tracheo – Esophageal Fistula? Enumerate the various type of Tracheo – Esophageal Fistula.
10. Logistic regression & odd's ratio

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MODEL QUESTION PAPER

SUBJECT: PAPER II: General Paediatrics.

1. Discuss the latest neonatal resuscitation program (NRP) Algorithm.
2. Write about the objectives and implementation of Intensified Mission Indradhanush.
3. Discuss the principles and challenges in providing “End of Life Care” for Neonates in India
4. A 26 week preterm infant with a birth weight of 780 grams is found to have grade 3 intraventricular haemorrhage (IVH) on neurosonogram. Write in detail about the etiopathogenesis, clinical presentation, grading, management and complications of IVH.
5. Define SAM and MAM. Add a note on management of SAM including rehabilitation phase
6. Discuss in details about various neuroprotective strategies in Hypoxic Ischemic Encephalopathy.
7. Define adolescence. Enumerate the various health issues faced by adolescent and discuss about Rashtriya Kishor SSwasthya Karyakram Program.
8. Mention about the International Classification of Retionopathy of Prematurity (ICROP) and management of ROP.
9. Enumerate the goals of RMNCH + A strategy. What are the services offered by this program for mothers and children?
10. Autism Spectrum Disorder

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MODEL QUESTION PAPER

SUBJECT: PAPER III: Systemic Paediatrics

1. What is Cerebral Visual Impairment? How is it diagnosed? What is its management?
2. Clinical features and management of Rheumatic Fever.
3. How do you grade Vesicoureteral Reflux (VUR). How do you manage a child with VUR. Write a brief note on antibiotic prophylaxis.
4. Laboratory evaluation and management of Acute Lymphatic Leukemia. (ALL).
5. Define Fulminant Hepatic Failure. Stages of Hepatic Encephallopathy. Management of Fulminant Heaptic Failure.
6. Clinical conditions associated with Maculopapular Rashes in children and their differential diagnosis.
7. Describe the characteristic changes observed in fundus examination of a child with
    a. Chronic Hypertension
    b. TORCH Infection
    c. Long standing diabetes mellitus
8. Discuss differential diagnosis of a Floppy Infant. Write a short note on clinical and laboratory characteristics of Werdnig – Hoffman Disease.
9. Causes, evaluation and management of obesity in children.
10. Describe a hyper cyanotic or Tet spell and management

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MODEL QUESTION PAPER

Paper IV: Recent Advances

1. Diagnostic Tests in Genetic Diseases
2. Liver Transplantation
3. Newer antibiotics for MDR Gram Negative Infections
4. Classify congenital heart disease. Discuss the role of intervention in the management of congenital heart disease.
5. Polyarticular juvenile idiopathic arthritis: Treatment advances.
6. Dengue Vaccine
7. Near Drowning.
8. Write briefly on hearing evaluation in children and add a note on Cochlear Implant
9. New onset refractory status epilepticus (NORSE)
10. Enumerate on etiology and assessment of obesity in children. Add a note on measurement of Insulin Resistance

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CHECKLIST

Student appraisal form for MD in Pediatrics										
	Elements	**Less than Satisfactory**			**Satisfactory**			**More than satisfactor**			**Comments**
		1	2	3	4	5	6	7	8	9	
1	**Scholastic Aptitude and Learning**										
1.1	Has Knowledge appropriate for level of training										
1.2	Participation and contribution to learning activity (e.g., Journal Club, Seminars, CME etc)										
1.3	Conduct of research and other scholarly activity assigned (e.g. Posters, publications etc.)										
1.4	Documentation of acquisition of competence (eg Log book)										
1.5	Performance in work based assessments										
1.6	Self- directed Learning										
2	**Care of the patient**										

2.1	Ability to provide patient care appropriate										
2.2	Ability to work with other members of the										
2.3	Ability to communicate appropriately and empathetically with patients families and care givers										
2.4	Ability to do procedures appropriate for the level of training and assigned role										
2.5	Ability to record and document work accurately and appropriate for level of training										
	Participation and contribution to health care quality										
3	Professional attributes										
3.1	Responsibility and accountability										
3.2	Contribution to growth of learning of the team										

3.3	Conduct that is ethically appropriate and respectful at all times										
4	Space for additional comments										
5	Disposition										
	Has this assessment been discussed with the trainee?	Y	N								
	If not explain										
	Name and Signature of the assesse										
	Name and Signature of the assessor										
	Date										