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PROGRAM
MD PAEDIATRICS
Pediatrics including Neonatology

(Revised with effect from 2014-2015 onwards)

Contents

Goals, Objectives,& Skills as per MCI Regulations

Goal .

The goal of post graduate medical education shall be to produce competent specialists and / or Medical teachers :-

i. who shall recognize the health needs of the community, and perform the professional obligations ethically and in keeping with the objectives of the national health policy

ii. who shall have mastered most of the competencies ,pertaining to pediatrics, that are required to be practiced at the secondary and tertiary levels of health care providing system.

iii. who shall be aware of the contemporary advance and developments in peditrics concerened.

iv. who shll have acquired spirit of scientific enquiry and is oriented to the principles of research methodology ,and

v. shall have acquired the basic skills in teaching of medical and para medical students**.**

Objectives :

At the end of post graduate training in pediatrics the student shall be able to ;

i. Recognize the importance of the concerned speciality in the context of the health needs of the community and the national priorities in the health section,

ii. practice the speciality ethically and in step with the principles of primary health care.

iii. Demonstrate sufficient understanding of the basic sciences relevant to pediatrics

iv. Identify social ,economic,environmental,biological and emotional determinants of health in a given case and take them in to account

while planning therapeutic ,rehabilitative, and preventive measures/ strategies.

v. Diagnose and manage majority of conditions in pediatrics on the basis of clinical assessment, appropriately selected and conducted investigations.

vi. Plan and advise measures for the prevention and rehabilitation of children suffering from diseases and disability related .

vii. Demonstrate skills in documentation of individual case details as well as morbidity and mortality rate relevant.

viii. Show empathy and human approach towards children and their families and exibit interpersonal behaviour in accordance with norms and expectations.

ix. Play the assigned role in the implementation of national health programme effectively and responsibly.

x. Organise and suprvise effectively the chosen .and /or assigned health care services

xi. Develop skills as a self-directed learner, recognize continuing education needs ,select and use appropriate learning resourses.

xii. Demonstrate competence in basic concepts of research methodology,and bea able to critically analyxe relevant published research literature

xiii. Develop skills in using educational methods and techniques as applicable to the teaching of medical/nursing.general physicians and paramedical health workers

xiv. Function as an effective leader of a health team engaged in health care ,research or training

Skills

Elicit an appropriate clinical history
Demonstrate appropriate clinical physical examination skills on children.
Plan ,decide up on and interpret appropriate cost effective investigations.
Perform essentil procedures both diagnostic and therapeutic.
Manage.resuscitate and stabilize children in pediatric or Neonatal emergencies.

Communication and attitudes

Communicate appropriately with guardians and children,assisting in their health care decision making
Practice child health care at the highest ethical level,protecting the child at all costs.
Respect parent's (and their guardian's) rights and professional relation ships(Doctor-Doctor,Doctor-Nurse,Doctor –Patient,Doctor-Society)

Program Outcomes

PO1 Competence to work as a specialist/ Medical teacher who shall recognize the health needs of the community, and perform the professional obligations ethically and in keeping with the objectives of the national health policy
PO2 Competence to work as a specialist/ Medical teacher at the secondary and tertiary levels of health care providing system.
PO3 Competence to work as a specialist/ Medical teacher who shall be aware of the contemporary advance and developments in peditrics concerened.
PO4 Competence to work as a specialist/ Medical teacher who shll have acquired spirit of scientific enquiry and is oriented to the principles of research methodology.
PO5 Competence to work as a specialist/ Medical teacher who shall have acquired the basic skills in teaching of medical and para medical students.

Program Specific Outcomes

PSO1 Ability to recognize the importance of the concerned speciality in the context of the health needs of the community and the national priorities in the health sector
PSO2 Ability to practice the speciality ethically and in step with the principles of primary health care.
PSO3 Ability to demonstrate sufficient understanding of the basic sciences relevant to pediatrics
PSO4 Competence to elicit an appropriate clinical history
PSO5 Ability to identify social ,economic,environmental,biological and emotional determinants of health in a given case and take them in to account
PSO6 Skill to diagnose and manage the conditions in pediatrics on the basis of clinical assessment, physical examination and appropriately selected and conducted investigations.
PSO7 Skill in performing essential procedures, both diagnositic and therapeutic.
PSO8 Competence to plan and advise measures for the prevention and rehabilitation of children suffering from diseases and disability related .
PSO9 Skill in managing, resuscitating and stabilizing children in pediatric or Neonatal emergencies.
PSO10 Demonstrate skills in documentation of individual case details as well as morbidity and mortality rate relevant.
PSO11 Play the assigned role in the implementation of national health programme effectively and responsibly.

COURSES

Course - I Basic Sciences as Applied to Pediatrics and Growth & Development (MDPE1)

CO1: Application of knowledge of anatomy, genetics and embryology in the practice of pediatrics
CO2: Application of knowledge of physiology and biochemistry in the practice of pediatrics
CO3: Application of knowledge of pathology, microbiology and immunology in the practice of pediatrics
CO4: Application of knowledge of pharmacology in the practice of pediatrics

Knowledge of applied anatomy, genetics and embryology, physiology and biochemistry in the practice of pediatrics; knowledge of pathology, microbiology and immunology necessary in the community practice of pediatrics. Brief Knowledge of pharmacology necessary in the practice of pediatric.

Course - II General Pediatrics including Neonatology, Preventive and Social Pediatrics (MDPE2)

CO1: Skill in history taking, physical examination and investigations.
CO2: Competency to manage common diseases/conditions in neonates.
CO3: Competency in preventive and social aspects of pediatrics including immunization.

Practical Skill in history taking, performing physical examination and ordering appropriate investigations. **Knowledge in knowing how to manage common diseases/conditions in neonates.**

Competency in performing Neonatal Resuscitation
Competency in managing a floppy child
Failure to thrive
Competency in preventive aspects as well as social aspects of pediatrics including immunization.

Course - III Pediatric Specialities (MDPE3)

CO1: Knowledge about Infectious disease, Rheumatology, Psychiatry and Behavioral Sciences aspects of pediatrics.
CO2: Knowledge about Skin, Eye, ENT, Adolescent Health, Critical Care aspects of pediatrics.
CO3: Knowledge about accidents, poisoning, neurology, disabilities, nephrology, endocrinology and gastroenterology aspects of pediatrics.
CO4: Knowledge about Neurology and Disabilities, Nephrology, Hematology and Oncology aspects of pediatrics.
CO5: Knowledge about Endocrinology, Gastroenterology, Respiratory and Cardiovascular diseases as applicable to pediatrics.

Knowledge on **Infectious disease, Rheumatology, Psychiatry, Behavioral Sciences Skin, Eye, ENT, Adolescent Health, Critical care aspects of pediatrics and its application in clinical scenario**

Early detection and management of childhood malignancies

Long term prognosis in childhood malignancies
Cystic Fibrosis
Competency in managing accidents, poisoning, neurological disabilities, nephrology, Hematology and Oncology , endocrinology , Respiratory and Cardiovascular diseases and gastroenterological aspects of pediatrics.

Course - IV Recent Advances in Pediatrics (MDPE4)
CO1: Uptodate knowledge about recent trends in the speciality.
CO2: Uptodate knowledge in the diagnostic and therapeutic methods in the speciality.
CO3: Uptodate knowledge about the recent publications.

Recent advances with regards to diagnostic and therapeutic modalities in pediatrics in the international setting . Knowledge of recent trends and publications about pediatrics

Soft Skills (MDPE5) – Elective Course
CO1: Function as an effective leader of a team engaged in health care, research or training
CO2: Develop skills in using educational methods and techniques as applicable to the teaching of medical/nursing/general physicians and paramedical health workers
CO3: Demonstrate competence in basic concepts of research methodology, and be able to critically analyse relevant published research literature
CO4: Develop skills as a self-directed learner with the attitude to be a life long learner.
CO5: Skill to organise and suprvise effectively the chosen and /or assigned health care services
CO6: Skill to communicate appropriately with guardians and children, assisting in their health care decision making
CO7: Skill to practice healthcare ethically, protecting the child at all costs.
CO8: Skill to organise and suprvise effectively the chosen and /or assigned health care services

Training Period and method of training: Period of training is three years (36 months / 6 academic terms), for MD including the period of examination. In addition to the general pediatrics including neonatology, students have to undergo posting in pediatric neurology, pediatric cardiology, pediatric surgery, dermatology, child psychiatry and pediatric hemato oncology departments for specified periods to get required knowledge.

They have to maintain a Log Book from the very beginning to record the day to day activities. It has to be got signed from the concerned faculty.
Each MD candidate has to do a research work under a Guide who shall be a qualified P.G teacher as per the MCI regulations.The thesis shoud be submitted to the University at least 6 months prior to the beginning of theory examinations

Training programme shall consists of clinical discussions, bed side clinics, symposia Journal clubs, mortality conferences, and thesis presentation.

Formal teaching sessions:
In addition to bedside teaching rounds, at least 2hrs of formal teaching per day are must.
Case presentation 4 days a week
Journal club: once a month
Seminars: once a month
Grand Rounds: Twice a month
Subject Review: Twice a month
Death review meeting : once a month
Clinical pathological conference :once a month
Guest lectures: once a week
Telemedicine programme: Twice a month
Others : CME/PALS/NALS

They have to participate in undergraduate teaching of medical /paramedical students.They have to attend medical camps, work shops CME programmes and National conferences to update the knowledge.

Eligibility to appear the University Examination:

Eighty percent attendance compulsory for appearing the University examination.

There will be 4 theory papers of 3 hour duration, covering Developmental pediatrics: growth and development including psychological development, psychological and behavioral disorders, laws relating to children, perinatal pediatrics, preventive pediatrics including child health services and under five clinics, nutrition and nutritional disorders, patho physiology of body fluids and drug therapy. Intensive care in pediatrics, and management of emergencies.

Immunity ,allergy and infectious diseases, parasitic infections, genetic disorders and chromosomal disorders and prenatal factors in disease, inborn error of metabolism. Disorders of digestive system, respiratory system, cardiovascular system. Disordrs of blood, urinary system, endocrine system, genital organs, nervous system, muscle, bone and joints, skin and eyes and malignant disorders.

Allied subjects"
Anatomy: Applied embryology,Development of major organ systems
Physiology: Applied physiology with regard to major organ systems
Biochemistry: Biochemical basis of diseases in children-Nutritional and metabolic
Pathology: Patho physiology of diseases in children
Microbiology: Clinical microbiology, applied to investigations for diseases in children, serology, staining, cultures
Pharmacology Clinical pharmacology,therapeutics of childhood diseases, Rational drug therapy

Community medicine: Health care delivery systems-structure and function, health statistics,, National programmes.
Pediatric surgery: Recognition and referral of surgical conditions in pediatrics
Radiology : Clinical indications and interpretations of X ray, Ultrasound, CT, MRI.
Legal and Ethical Medicine: Rights and protection of children, Consumer protection Act, Basic principals of Ethics.

There will be two University examinations in an year with an interval of not less than 4 months and not more than 6 months between the two examinations.

Four theory papers of 100 marks each:

Paper I: Basic sciences as applied to pediatrics and Growth & Development
Paper II: General Pediatrics including neonatology,preventive and social pediatrics.
Paper III: Pediatric specialities
Paper IV: Recent advances in pediatrics

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Clinical and Viva voce:
The total marks for practical/clinical examination shall be 200.

Clinical examination consists of one long case (45 minutes) for 100 marks and 2 shot cases (30 minutes each) of 100 marks together. Total of 200 marks.

Viva voce shall aim at assessing the candidates knowledge and competence about the subject,investigative procedures, therapeutic techniques,and other aspects of the speciality.Total marks for viva voce 100

Total marks for theory 400,Total marks for clinical & viva voce 300

Candidates shall secure not less than 50% marks in each head of passing which shall include (I) Theory (2) Practical including clinical and viva voce examination.

Maximum marks for	Theory (Max.)	Practical (Max.)	Viva (Max.)	Grand Total
MD degree course	400	200	100	700

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Recommended Reading

1.Nelson- Text book of Pediatrics
2.Forfar & Arneils-Text book of pediatrics
3.Illinworth-Normal child
4. David G Nathan- Hematology of Infancy & Childhood
5.Pediatric neurology-Swaiman.
6.Nadas-Pediatric cardiology
7.Meharban Singh's Care of the New borns

JOURNALS:

1.PCNA
2.Arhives of Diseases of Childhood
3.Indian Pediatrics
4.Indian J of Pediatrics
5.Pediatrics
6.Journal of Pediatrics
7.Acta Pediatrica Scandinavia

References Series

1.Year book of Pediatrics
2.Suraj Gupta's Recent Advances in Pediatrics

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Model Question Paper

Paper II-General Pediatrics including neonatology, preventive and social pediatrics

Time: 3 Hrs.
Maximum Marks: 100

1. A 5 year old male child is referred to you for Fever of Unknown Origin (FUO).How will you evaluate the child to arrive at a correct diagnosis? (20 marks)

2.Write briefly on :

a.Rh incompatability

b.Opium poisoning

c.Vesico ureteric reflux

d.Kwashiorkor (10 x 4=40)

3.Write short notes on :

a.Sideroblastic anemia

b.Chylous ascites

c.’Soft signs’ in neurology

d.Partial anomalous pulmonary venous drainage (10 x 4 = 40)
