



College of Physicians and Surgeons of Mumbai

Syllabus for CPS-PG-Course

DPICU-DIPLOMA IN PAEDIATRIC INTENSIVE CARE

College of Physicians and Surgeons of Mumbai

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DPICU-DIPLOMA IN PAEDIATRIC INTENSIVE CARE

AIMS:

To implement the curriculum to train the qualified Pediatricians in understanding the basics of Pediatric emergency and intensive care medicine, simultaneously working towards progressive positive outcomes in the form of morbidity and mortality

To train the Pediatricians to develop skills and experience in early detection and management of Pediatric critical illnesses

To train the Pediatricians in basic and advanced mechanical ventilation and day to day care of acutely ill children

To train the Pediatricians in clinico- academic activities through various teaching programs, research, and publications related to Pediatric intensive care

COURSE DESCRIPTION

Eligibility Criteria for Candidates:

i. A candidate should possess MBBS degree/ equivalent degree as per provisions of Indian Medical Council Act.

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ii. Candidates having a recognized 3 years degree Qualification (MD/MS/DNB) in Paediatrics speciality

or 2 years Diploma Qualification in Paediatrics speciality

Duration of the Course : 2 years

Additional postings are suggested in following areas for period of 2 weeks each:-

Cardiac Surgery

Neurosurgery

Chemotherapy unit

Intensive care with advance facilities Intake Capacity: 2 students every year.

SYLLABUS

Introduction

Pediatric Intensive Care has become a rapidly growing branch in the past decade in India, but still it is in its developing stage in most places in the country. There are only few centers where satisfactory Pediatric critical care teaching is available. The present fellowship course is designed keeping in mind the need for learning the common Pediatric emergencies, basics of intensive care & monitoring, advanced mechanical ventilation and life support. This fellowship course is planned keeping in mind the need of Pediatric intensive care being delivered to periphery, so that the Pediatrician trained as the Fellows at this institute will be able and confident delivering the PICU services to the hospitals/teaching institutes they wish to practice, with the state of the art knowledge and adequate experience.

Set up and categorization of PICU :-

PICU with level III facility (Based on infrastructure/facilities/patient work load with diagnosis)

Mandatory Protocols :- written stepwise protocols with reference to standard international protocol (with suitable modifications for Indian scenario)

Curriculum of PICU:

Basic training in Pediatric emergencies and intensive care

Clinical skills in procedures, understanding equipments, monitoring and resuscitation

Mechanical ventilation

Allied posting in Pediatric surgery and anesthesia- 1 month

research programs, teaching skills

Designing a PICU: replication

Basic training in Pediatric emergencies and intensive care:

Emergency and critical Pediatrics:

Scope and need

- Pediatric emergency resuscitation and Pediatric advanced life support, and lifesaving procedures
- Common Pediatric emergencies
- Shock
- Sepsis and Hospital acquired infections
- Convulsion and Status epilepticus
- Respiratory distress

Cardiac emergencies including arrhythmias, CCF

- Tetanus
- Burns

Snake Bite & Scorpion

- Envenomation –snakebite,scorpionbite
- Near drowning
- Hemorrhagic
- Syncope
- Anaphylaxis
- Hypertension

Diabetic ketoacidosis

Inborn error of metabolism :-Diagnosis/Immediate evaluation/screening and lab diagnosis/immediate measures (e.g.: Supplement, dietary restriction,intervention)

- Poisoning - diagnosis and management/antidotes
- Access to rare antidotes/literature/websites
- Neurological emergencies including ICP and coning
- Approach in a case of suspected brain death

Taking care of a PICU child: basic nursing

- Taking care of a PICU child: anesthesia and analgesia
- Trauma, head injury and other surgical emergencies
- Transporting a sick child

Safety and Bio waste management

- Investigations in PICU: including radiology
- PRISM- PIM Score

Record keeping in PICU

Inclusion/Emphasis on following topics is suggested

Poisoning

Common : diagnosis and management

Unknown : The universal antidotes and immediate measures

Rare : Access should be available/Literature/Website/and access to rare antidotes

Inborn errors of Metabolism :

Vascular / Central line access: Jugular, subclavian, femoral and cut down access

Arterial catheterization Intraosseous line

Ventricular tap and VP shunt Pleuro- and peritoneocentesis Peritoneal dialysis

Difficult intubations

Monitoring: Needs, modalities and action Resuscitation:

Pediatric advanced life support: CPR, intubation and medicines

Monitoring a resuscitated child

Equipments- oInvasive and noninvasiveequipmentsoMultichanel Monitors, defibrillators
Nebulisers, suctions, O2 delivery systems oVentilators
Machines: ECG, Doppler, Echo oEEG and ICP monitoring oMaintenance and recordkeeping
PICU Pharmacology
Mechanical ventilation
Basic physiology of respiratory system in a child Need for artificial ventilation
Modalities and machines: know your ventilators ABG analysis; ABG actions
Ventilation modes and needs, Airway dynamics Ventilation graphics, HFO, Trouble shootings
Controlled ventilations, Assist ventilations
Care of a ventilated child; Weaning from ventilators CPAP, Tracheostomy, VAP
ARDS and its management
Research programs, teaching skills
Clinical Core competency skills : development andassessment
Research dissertationcompletion
Organizing aCME
Representation inconferences
Writing a paper and basics ofstatistics
Staying in touch and staying updated: VirtualPICU
Designing a PICU: replica creation
Understanding a need for PICU at periphery Point of Care PICU
PICU designing: budget , management and maintenance
Implementing a PICU protocoland a teaching program
Teachingscheme:
Daily teaching clinical rounds & case discussions, Bedside clinics and discussions
Monthly critical care audit meets, Success cases discussions Discussions on mortality data
Monthly statistics of the unit Equipment maintenance Classroom lecture series
Lectures on advances in Pediatric critical care
Guest lectures: Bimonthly multidisciplinary international & national faculty Seminars
Antimicrobial and infection control policies Journal reading and advances in therapeutics Case
presentations: twice a week
Hands on supervision of procedures

Courseevaluation:

After completion of curriculum the candidates will be evaluated through dissertation, written and practical examination, conducted by two Pediatric intensivists independently.

The results are graded as A, B or C.

Infrastructure:

Faculty will be from the Department of Pediatrics In house PICU library is required

Dedicated Pediatric intensive care unit and equipments

Certification: Certificate will be awarded on successful completion of the course with minimum 80% attendance.

DPICU: DIPLOMA IN PEDIATRIC INTENSIVE CAREExamination Pattern**Theory Examination:**

PAPER I	PAPER II	PAPER III
ANATOMY PHYSIOLOGY	THERAPEUTICS	APPLIED SCIENCES & RECENT ADVANCES
Section I	Section I	Section I
Q.1. 10 Marks	Q.1. 10 Marks	Q.1. 10 Marks
Q.2. 10 Marks	Q.2. 10 Marks	Q.2. 10 Marks
Q.3. 10 Marks	Q.3. 10 Marks	Q.3. 10 Marks
Q.4. 10 Marks	Q.4. 10 Marks	Q.4. 10 Marks
Q.5. 10 Marks	Q.5. 10 Marks	Q.5. 10 Marks
Total 50 Marks	Total 50 Marks	Total 50 Marks
Section II	Section II	Section II
Q.6. 10 Marks	Q.6. 10 Marks	Q.6. 10 Marks
Q.7. 10 Marks	Q.7. 10 Marks	Q.7. 10 Marks
Q.8. 10 Marks	Q.8. 10 Marks	Q.8. 10 Marks
Q.9. 10 Marks	Q.9. 10 Marks	Q.9. 10 Marks
Q.10. 10 Marks	Q.10. 10 Marks	Q.10. 10 Marks
Total 50 Marks	Total 50 Marks	Total 50 Marks
Section I + II = 100 Marks	Section I + II = 100 Marks	Section I + II = 100 Marks
Total Theory = 300 Marks, Passing = 150 (i.e. 50%) Marks in aggregate		

Practical Examination:		Marks
Paper - IV	Clinical Practical	100
Paper - V	Oral & Viva	100
Paper - VI	Case	100
Total Marks	(Aggregate marks for passing is 50% out of total.)	300

BOOKS:

Textbook of Pediatric Intensive Care (Dr P Khilnani) Mechanical Ventilation (Chnag)

Pediatrics Intensive Care (Tobias)

IAP Textbook of Pediatric Intensive Care Pediatric Emergencies (Meherbansingh)

