

Guidelines for Post Graduate Training Programme for DCH

DCH Programme Objectives

The goal of DCH course in Pediatrics is to produce a competent pediatrician who :

- recognizes the health needs of infants, children and adolescents and carries out professional obligations in keeping with principles of National Health Policy and professional ethics.
- has acquired the competencies pertaining to pediatrics that are required to be practiced in the community and at all levels of health system.
- has acquired skills in effectively communicating with the child, family and the community.
- is aware of the contemporary advances and developments in medical sciences as related to child health.
- is sensitized to principles of research methodology

Objectives

The objectives to be fulfilled at the completion of the course are as follows :

Knowledge

1. Understand importance of child health in context of health priority of the country.
2. Describe and monitor growth and development of children and identify deviations from normal.
3. Describe etio-pathogenesis, principles of clinical diagnosis, investigations and treatment of diseases of childhood.
4. Outline various childhood emergencies & their management
5. Develop an understanding of Basic (Pre and Para clinical) Sciences and its application to clinical practice
6. Identify and understand socio-economic environmental –cultural factors in health care.
7. Plan comprehensive treatment for illness using principles of rational drug therapy.
8. Plan measures for prevention of childhood disease and disability.
9. Identify normal, 'at risk' and sick neonates
10. Provide care to normal, 'at risk' and sick neonates
11. Recognize problems requiring referral & identify pre-referral treatment.
12. Assist in research and publishing of scientific articles.

Skills

1. Take detailed history, perform full physical examination including neurodevelopment & behavioral assessment and correlate to make a clinical diagnosis.
2. Perform relevant investigative and therapeutic procedures for the pediatric patient.
3. Interpret imaging and laboratory results.
4. Diagnose illness in children based on the analysis of history, physical examination and investigate work up.
5. Plan and deliver comprehensive treatment for illness in children using principles of rational drug therapy.
6. Provide emergency management to a sick child

Communication and Attitudes

1. Practice the speciality of Pediatrics in keeping with the principles of professional ethics.
2. Demonstrate empathy and humane approach towards patients and their families and keep their sensibilities in high esteem.
3. Demonstrate communication skills of a high order in explaining management and prognosis, providing counseling and giving health education messages to patients, families and communities.
4. Develop an attitude of being a self-directed learner, recognize continuing educational needs, use appropriate learning resources.
5. Function as a productive member of a team engaged in health care, research and education.

3. Syllabus

General Guidelines: During the training period effort must always be made that adequate time is spent in discussing child health problems of public health importance in the country or particular region.

- 3.1. **Disorders** (*Definition, Epidemiology, etiopathogenesis, presentation, complications, differential diagnosis, and treatment*).
- 3.2.1. **Growth and development.** Principles of growth and development, normal growth and development in childhood and adolescence, *growth & development monitoring*, deviations in growth and development, sexual maturation and its disturbances.
- 3.2.2. **Disorders of fluids & electrolytes:** Physiology of fluids, electrolytes and acid-basis, dehydration & fluid management, dyselectrolytemia, acid-base disorders
- 3.2.3. **Neonatology.** Perinatal care, normal newborn, care in the labor room and resuscitation, low birth weight, prematurity, newborn feeding, common transient phenomena, respiratory distress, apnea, infections, jaundice, anemia and bleeding disorders, neurologic disorders, gastrointestinal disorders, renal disorders, malformations, thermoregulation and its disorders, understanding of perinatal medicine.
- 3.2.4. **Nutrition.** Maternal nutritional disorders: impact on fetal outcome, nutrition for the low birth weight, breast feeding, infant feeding including complementary feeding, protein energy malnutrition, vitamin and mineral deficiencies, trace elements of nutritional importance, obesity. Adolescent nutrition, nutritional management in diarrhea, nutritional management of systemic illnesses (celiac disease, hepatobiliary disorders, nephrotic syndrome), parenteral and enteral nutrition in neonates and children.
- 3.2.5. **Cardiovascular.** Congenital heart diseases (cyanotic and acyanotic), rheumatic fever and rheumatic heart disease, infective endocarditis, arrhythmia, diseases of myocardium (cardiomyopathy, myocarditis), diseases of pericardium, systemic hypertension,.
- 3.2.6. **Respiratory.** Congenital and acquired disorders of nose, infections of upper respiratory tract, tonsils and adenoids, obstructive sleep apnea. Congenital anomalies of lower respiratory tract, acute inflammatory upper airway obstruction, FB in larynx, trachea and bronchi, subglottic stenosis (Acute & Chronic), trauma to larynx, neoplasm of larynx and trachea. Bronchitis, bronchiolitis, aspiration pneumonia, GER, Acute pneumonia, interstitial pneumonia, suppurative lung disease, atelectasis, lung cysts, emphysema & hyperinflation bronchial asthma, pulmonary edema, bronchiectasis, pleural effusion, pulmonary leaks, mediastinal mass.

- 3.2.7. ***Gastrointestinal and liver diseases.*** Diseases of mouth, oral cavity and tongue, Disorders of deglutition and esophagus, peptic ulcer disease, *H. pylori* infection, foreign body, congenital pyloric stenosis, intestinal obstruction, malabsorption syndrome, acute and chronic diarrhea, Irritable bowel syndrome, ulcerative colitis, Hirschsprung disease, anorectal malformations. Liver disorders: hepatitis, hepatic failure, chronic liver disease, Wilson's disease, Budd-Chiari syndrome, metabolic diseases of liver, cirrhosis, and portal hypertension.
- 3.2.8. ***Genitourinary disorders.*** Acute and chronic glomerulonephritis, nephrotic syndrome, hemolytic-uremic syndrome, urinary tract infection, VUR and renal scarring, renal involvement in systemic diseases, renal tubular disorders, congenital and hereditary renal disorders, renal and bladder stones, posterior urethral valves, hydronephrosis, voiding dysfunction, undescended testis, Wilm's tumor, fluid-electrolyte disturbances.
- 3.2.9. ***Neurologic disorders.*** Seizure and non seizure paroxysmal events, epilepsy and epileptic syndromes of childhood, meningitis, brain abscess, coma, acute encephalitis and febrile encephalopathies, Guillain-Barre syndrome, neurocysticercosis and other neuro-infestations, HIV encephalopathy, SSPE, cerebral palsy, neurometabolic and ***neuro-degenerative*** disorders, mental retardation, learning disabilities, muscular dystrophies, acute flaccid paralysis and AFP surveillance, ataxia, movement disorders of childhood, CNS tumor, malformations, ***neuro-cutaneous disorders, diseases of spinal cord & neuro-muscular junction***
- 3.2.10. ***Hematology & Oncology.*** Deficiency anemia, hemolytic anemia, aplastic anemia/pancytopenia, disorders of hemostasis, thrombocytopenia, blood component therapy, transfusion related infections, bone marrow transplant / stem cell transplant, acute and chronic leukemia, myelodysplastic syndrome, Hodgkin disease, non-Hodgkin's lymphoma, neuroblastoma, Wilms tumor, hypercoagulable states.
- 3.2.11. ***Endocrinology.*** Hypopituitarism/hyperpituitarism, Diabetes insipidus, pubertal disorders, hypo- and hyperthyroidism, hypo- and hyperparathyroidism, adrenal insufficiency, ***congenital adrenal insufficiency***, Cushing's syndrome, adrenogenital syndromes, diabetes mellitus, short stature, failure to thrive, ***ambiguous genitalia***, pubertal changes and gynecological disorders, dyslipidemia.
- 3.2.12. ***Infections.*** Bacterial, viral, fungal, parasitic, rickettsial, mycoplasma, *Pneumocystis carini* infections, chlamydia, protozoal and parasitic, tuberculosis, HIV, nosocomial infections. Control of epidemics and infection prevention.
- 3.2.13. ***Emergency and critical care.*** Emergency care of shock, cardiorespiratory arrest, respiratory failure, congestive cardiac failure, acute renal failure, status epilepticus, fluid and electrolyte disturbances and its therapy, acid-base disturbances, poisoning, accidents, scorpion & snake bites.

3.2.14. **Immunology and Rheumatology.** Arthritis (acute and chronic), connective tissue disorders, disorders of immunoglobulins, T and B cell disorders, immunodeficiency syndromes.

3.2.15. **ENT.** Acute and chronic otitis media, conductive/sensorineural hearing loss, acute/chronic tonsillitis/adenoids, allergic rhinitis/sinusitis.

3.2.16. **Skin diseases.** Exanthematous illnesses vascular lesions, pigment disorders, vesicobullous disorders, infections: pyogenic and fungal and parasitic, Steven-Johnson syndrome, eczema, seborrhea dermatitis, drug rash, urticaria, alopecia, ichthyosis.

3.2.17. **Eye problems.** Refraction & accommodation, partial/total loss of vision, cataract, night blindness, chorioretinitis, strabismus, conjunctival & corneal disorders, ROP, retinoblastoma, optic atrophy, papilloedema.

3.2.18. **Behavioral and psychological disorders.** Rumination, pica, enuresis, encopresis, sleep disorders, habit disorders, breath holding spells, anxiety disorders, mood disorders, temper tantrums, attention deficit hyperactivity disorder, infantile autism.

3.2.19 Community and social pediatrics. *National Health Nutrition Programs, nutrition screening of community, prevention of blindness, School Health Programs, health legislation, adoption, child labor, juvenile delinquency, general principles of prevention and control of infections including food borne, waterborne, soil borne and vector borne diseases, investigations of an outbreak in a community, child labor, rights of the child, national policy of child health and population.*

3.2.19. **Genetics.** Chromosomal disorders, single gene disorders, multifactorial disorders/polygenic, genetic diagnosis, and prenatal diagnosis.

3.2.20. **Orthopedics.** Major congenital orthopedic deformities, bone and joint infections, Potts' spine, and common bone tumors.

3.4. Basic sciences

Embryogenesis of different organ system especially heart, genitourinary system, gastrointestinal tract, applied anatomy of different organs, functions of kidney, liver, lungs, heart and endocrinal glands. Physiology of micturition and defecation, placental physiology, fetal and neonatal circulation, regulation of temperature (esp. newborn), blood pressure, acid base balance, fluid electrolyte balance, calcium metabolism, vitamins and their functions, hematopoiesis, hemostasis, bilirubin metabolism, growth and

development at different ages, puberty and its regulation, nutrition, normal requirements of various nutrients, basic immunology, bio-statistics, clinical epidemiology, ethical and medico-legal issues, teaching methodology and managerial skills. Pharmacokinetics of commonly used drugs, microbial agents and their epidemiology.

Approach to important clinical symptoms/problems

- Fever with/without rash
- Chronic/recurrent fever
- PUO
- Protein energy malnutrition
- Chronic/recurrent cough
- Chronic diarrhea
- Vomiting
- Jaundice
- Chronic liver disease
- Organomegaly
- Ascites
- Anasarca
- Failure to thrive
- Short stature
- Delayed development
- Developmental regression
- Respiratory distress
- Wheezing
- Recurrent /persistent pneumonia
- Anemia
- Lymphadenopathy
- Bleeding disorder
- Murmur
- Cyanosis
- CHF
- Hypertension
- Hemiplegia
- Hematuria
- Paraplegia
- Monoplegia
- Quadriplegia
- Seizures
- Limp
- Floppy infant
- Large head

- Low birth weight neonate
- Preterm neonate
- Microcephaly
- Acute flaccid paralysis
- Obesity
- Thyroid enlargement
- Precocious puberty
- Delayed puberty
- Ambiguous genitalia

SKILLS

I. History and Examination

The student must gain proficiency in eliciting, processing and systematically presenting pediatric history and examination with due emphasis on the important and minimization of less important facts.

The following skills must be achieved :

1. Recognition and demonstration of physical findings like anemia, jaundice, grades of coma, severity of dehydration, capillary filling time, lethargy, recording of vital parameters, etc.
2. Recording of height, weight, head circumference and mid arm circumference and interpretation of these parameters using growth reference standards for assessment of nutritional status and growth.
3. Assessment of pubertal growth.
4. Complete development assessment by history and physical examination.
5. Systematic examination of all systems.
6. Neonatal examination including gestation assessment by physical and neurological criteria.
7. Examination of the fundus and the ear-drum.

II. Monitoring Skills

Non invasive monitoring of vital functions including BP, , PR, RR, SPO₂. and heart-rate patterns (ECG)

III. Investigative Procedures

1. Venous, capillary and arterial blood sampling for investigations and sample collection using appropriate asepsis and universal precautions.

2. Pleural, peritoneal sub-dural tap, lumbar puncture, ventricular tap.
3. Tuberculin test.
4. Biopsy of liver and kidney.
5. Urethral catheterization and supra-pubic tap.
6. Gastric content aspiration
Desirable : Bone marrow biopsy, pericardial tap, FNAC

IV. Therapeutic Skills

1. Breast feeding assessment and counseling on appropriate technique of breast feeding and management of common problems associated with it.
2. Establishment of vascular access
3. Administration of injections using safe injection practices.
4. Determination of volume and composition of intravenous fluids and their administration.
5. Neonatal and Pediatric basic and advanced life support.
6. Oxygen administration, CPAP and nebulisation therapy.
7. Blood and blood component therapy.
8. Intra-osseous fluid administration, intra-thecal drug administration.
9. Phototherapy, umbilical artery & venous catheterization and exchange transfusion.
10. Nasogastric feeding.
11. Common dressings and abscess drainage.
12. Basic principles of rehabilitation.

Desirable: Peritoneal dialysis, venesection, tracheostomy, central venous cannulation and CVP monitoring, intercostal tube drainage, mechanical ventilation.

IV. Bed side investigations

1. Hb, TLC, ESR, micro ESR, peripheral smear.
2. Urine routine and microscopic examination, urine reducing sugar by Benedicts test.
3. Stool microscopy and hanging drop.
4. Examination of CSF and other body fluids.
5. Blood sugar
6. Shake test on gastric aspirate

7. Gram stain, ZN stain.

V. Patient Management Skills

1. Proficiency in management of all pediatric emergencies.
2. Drawing and executing patient management plan and long term care.
3. Documenting patient records on day to day basis and problem oriented medical record.
4. Care of a normal and sick newborn, management of neonatal disorders like hypothermia, sepsis, convulsions, jaundice, metabolic problems, etc.
5. Identifying need for timely referral to appropriate departments / health care facility & pre-transport stabilization of the sick child

VI. Interpretation of Investigations

1. Plain x-ray chest, abdomen, skeletal system
2. Contrast radiological studies: Barium swallow, barium meal, barium enema, IVP, MCU.
3. Ultrasound skull, abdomen.
4. Histopathological, biochemical and microbiological investigations
5. CT Scan / MRI skull.
6. ECG
7. ABG

Desirable: Interpretation of radio-isotope studies, audiogram, common EEG patterns, neuro-physiological studies, BERA, VER, EMG, NCV, CT/MRI abdomen and chest, respiratory function tests

VII. Communication Skills & Attitudes

1. Communicating with parents / child about nature of illness and management plan, prognostication., breaking bad news
2. Counseling parents on breast feeding, nutrition, immunization, disease prevention and promoting healthy life style.
3. Genetic counseling
4. Communication with colleagues, nurses and paramedical workers.
5. Appropriate relation with pharmaceutical industry.

VIII. Academic Skills

Familiarity with basic research methodology

Desirable: Writing and presenting a paper,
Teaching sessions for nurses and para medical workers.

Log Book

During his/her training, the candidate should maintain a Log Book indicating the duration of the postings / work done in Paediatric Wards, OPDs and Casualty. It should indicate the procedures assisted and performed by the candidate, and the teaching sessions, symposia, journal club meetings, etc., attended.

The purpose of the Log Book is to :

1. Help to maintain a record of the work done during training.
2. Enable the consultant to have first hand information about the work done and to intervene whenever necessary.
3. Use it to assess the experience gained periodically.

The log book shall be used to aid the internal evaluation of the student.

TEACHING PROGRAMME

GENERAL PRINCIPLES

- Acquisition of practical competencies being the keystone of PG medical education, PG training should be skills oriented.
- Learning in PG programme should be essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort.

Acquisition of theoretical skills

- Self study
- Journal Club
- Seminars
- Lectures
- Inter-ward & inter-departmental case discussion
- CME Programmes for post-graduate students

Acquisition of Practical skills

- Bed-side teaching rounds
- NALS & PALS course
- Workshops on various subjects for examples : Assessment for growth & development, diarrhoea management, Ventilatory support, Communication skills etc.
- Clinico-radiological conference

It is desirable that at joining pediatric residency programme a post graduate student should attend the NALS & PALS courses and training in hospital waste management. A supervised training in practical procedure like blood sampling, I/V line insertion & other clinical procedures should be undertaken at the earliest opportunity. These should be supported by the videos where available. In addition, a series of orientation classes should be organized for them on subjects including common pediatric emergencies, fluid & electrolyte management etc. A suggested list of these classes is enclosed (Annex 1).

Formal teaching sessions

In addition to bedside teaching rounds, at least 5 hours of formal teaching per week are a must. The departments may select the activities from those mentioned above.

ASSESSMENT

General Principles :

- The Assessment should valid, objectives, and reliable.
- It must cover cognitive, psychomotor and affective domains.
- Formative, and summative assessment should be conducted in theory as well as practical/clinicals. In addition, thesis should be assessed separately.

Formative (Internal Assessment) 20% of the internal assessment marks to be added to the final exams.

Objective

- Providing feedback to the students
 - Contribute towards final evaluation
- Or
- Clearing internal assessment mandatory for appearing in the final exam.

Fields of Assessment

- | | |
|------------------------------------|--------------------------------------|
| 1. Personal attributes | Ongoing after each clinical posting. |
| 2. Clinical skills and performance | -do- |
| 3. Academic activities | -do- |
| 4. Theory Exams | |
| 5. Practical Exams | |

I. Theory Assessment

The theoretical knowledge shall be assessed by means of written exams at the end of 1st year, & sent up examination (at 1 yrs. 9 months.)

Syllabus for theory exams (Total maximum marks = 200)

| | |
|--|---------------------------------|
| I year(end): Growth and development, Nutrition, , Infectious disease, Neonatology, Fluid & electrolytes and approach to disorders and emergencies. | General Pediatrics, MM = 100 |
|--|---------------------------------|

| | |
|----------------|----------|
| Whole syllabus | MM = 100 |
|----------------|----------|

II. Practical Assessment (Total maximum marks = 200)

| | |
|--------------------------|----------|
| I Year OSCE and one case | MM = 100 |
|--------------------------|----------|

II Year Three cases

MM = 100

Other Evaluation

1. Academic Presentations
2. Scientific Excellence
3. Skill Proficiency
4. Personal attributes
5. Teaching activities

The above fields shall be graded as “*excellent*”, “*meets expectations*” & “*below expectations*”. The academic presentation shall be graded at the time of presentation by the Consultant in-charge. Evaluation on points 2 to 5 shall be done by the Unit in-charge at the end of every semester. A sample of the evaluation proforma for all the above points is presented in Annexures 2-5.

Summative Assessment

The theory paper & the practicals shall be marked The evaluation of theory papers shall be done independently before the commencement of practical examination.

- Ratio of marks in theory and practicals will be equal
- The minimum percentage require to pass will be 50%
- Candidate will have to pass theory and practical exam separately.

I. Theory (Total Maximum Marks = 200)

| | | |
|-----------|--|---------|
| Paper 1: | Basic sciences as applied to pediatrics & community pediatrics. | MM =50 |
| Paper 2 : | Neonatology | MM = 50 |
| Paper 3 : | General pediatrics including advances in pediatrics relating to Cluster-I specialities | MM = 50 |
| Paper 4 : | General Pediarics including advances in pediatrics relating to Cluster-II specialities | MM = 50 |

Cluster- I Nutrition, Growth and development, Immunization, Infectious disease, Genetics, Immunology, Rheumatology Psychiatry and Behavioral Sciences, Skin, Eye, ENT, Adolescent Health, Critical Care, Accidents and Poisoning.

Cluster- II Neurology and disabilities, Nephrology, Hematology-oncology, endocrinology, Gastroenterology and Hepatology, Respiratory and cardiovascular disorder.

In each paper there should be 10 short essay questions (SEQ)

II. Practicals (Total Maximum Marks = 200)

1. 3 cases of equal weightage carrying 40 marks each

Desirable distribution of cases :

Case I – Neonate/young infant <3 months of age

Case II – Child upto 4-5 Years

Case III – Child more than 5 years.

2. OSCE (Total Marks =80)

The OSCE shall consist of 10 stations of 8 marks each. It shall consist of 6 observed stations (1 by each examiner) & 4 unobserved stations.

The observed stations shall assess the students on the following skills.

- NALS/PALS
- Assessment of growth & development
- Communication/Counseling skills
- History taking
- Examination
- Procedural skills

The unobserved stations shall check the analytic skills of the students for example : Interpretation of laboratory investigations, ABG/ECG, Radiological investigations.

Annex 1

Orientation sessions for Residents joining post-graduation in Pediatrics

Common for all Residents of the Institute

- Orientation to the Hospital : Various Departments & facilities available
- Communication skills : Patients & Colleagues

For Pediatrics Residents

- Introduction to residency in Pediatrics
- Universal Precautions and Appropriate Disposal of Hospital Waste
- Management of Shock
- Congestive Cardiac Failure
- Normal Fluid & Electrolyte Requirement
- Disorders of Fluid & Electrolyte Balance
- ABG Interpretation & Management of Disorders of Acid-Base Balance\
- Neonatal Seizures
- Evaluation of a sick newborn
- Management of Hypothermia and Hypoglycemia in the Newborn
- Management of Seizures & Status Epilepticus
- Management of Comatose Patients
- Hospital Management of Severe PEM
- Acute Renal Failure
- Fulminant Hepatic Failure
- Approach to a child with respiratory distress & initial management
- Management of Acute Diarrhoea
- Approach to a Bleeding Child and its Management
- Rational Antibiotic Therapy

Annex 2

End Semester Evaluation of the post graduate students

Name of the Students _____

Place of Posting _____

Semester 1 / 2 / 3 / 4

From _____ / To _____

1. Skill Proficiency

| | Excellent | Meets Expectation | Below Expectation |
|---|------------------|------------------------------|------------------------------|
| Attendance in academic activities | | | |
| Performance in ward procedures | | | |
| Performance in emergency procedures | | | |
| Performance in neonatology procedures | | | |
| Handling of equipments | | | |
| Performance in laboratory procedures | | | |
| Decision making/formulation of management plan | | | |
| Record writing | | | |
| Administration | | | |
| Leadership qualities | | | |

2. Personal Attributes

| | Excellent | Meets Expectation | Below Expectation |
|--|------------------|--------------------------|--------------------------|
| Availability (punctual, available on duty, responds promptly to calls, takes proper permission for leave) | | | |
| Sincerity & Motivation (dependable, honest, admits mistake, does not cook up information, exhibits good moral values, loyal to institution, takes initiative & responsibility, keen desire to learn) | | | |
| Diligence & performance (dedicated, hard working, does not shirk duties, leaves no pending work, does not sit idle. Competent in clinical case, skilled in procedure & file work) | | | |
| Academic ability (intelligent, shows sound knowledge/skills, participates in academic activities, self-learning ability) | | | |
| Interpersonal skills (compassionate attitude to patients, gets along well with colleagues, paramedics and respectful to seniors) | | | |

3. Scientific Excellence

- Awards
- Publications
- Conference paper presentations
- Attendance at C.M.E., Workshop, Symposium

4. Teaching Activities

- Health talks for parents/patients
- Under graduate clinical sessions
- Classes for nurse & paramedical workers

Signature of the Unit In-charge

Annex 3

Evaluation Sheet – Journal Club

Name of the Student _____

Date of Presentation _____

| Points to be considered | Excellent | Meets Expectation | Below Expectation |
|--|------------------|--------------------------|--------------------------|
| Choice of article | | | |
| Cogency of presentation | | | |
| Critical review | | | |
| Whether cross-reference and other relevant publications consulted. | | | |
| Audio-Visual aids | | | |
| Interaction | | | |

Signature of the Consultant In-charge

Annex 4

Evaluation Sheet – Seminar/Review

Name of the Student _____

Date of Presentation _____

| Points to be considered | Excellent | Meets Expectation | Below Expectation |
|-----------------------------------|------------------|--------------------------|--------------------------|
| Presentation | | | |
| Completeness of preparation | | | |
| Cogency of presentation | | | |
| Use of Audio-Visual aids | | | |
| Understanding the subject | | | |
| Ability to answer questions | | | |
| Time scheduling | | | |
| Consulted all relevant literature | | | |

Signature of the Consultant In-charge

Annex 5

Evaluation Sheet – Clinical Case Presentation

Name of the Student _____

Date of Presentation _____

| Points to be considered | Excellent | Meets Expectation | Below Expectation |
|--|------------------|--------------------------|--------------------------|
| Logic Order | | | |
| Completeness of history | | | |
| Cogency of presentation | | | |
| Whether all relevant points elicited | | | |
| Mentioned all positive/negative points of importance | | | |
| Accuracy of general physical examination | | | |
| Whether all physical signs elicited correctly | | | |
| Whether any major sign missed or misinterpreted | | | |
| Diagnosis : whether it follows logically from history & findings Management <ul style="list-style-type: none">• Completes list of investigations• Relevant order• Interpretation of investigations• Treatment principles & details | | | |
| Ability to reach to questioning-whether answers relevant and complete | | | |
| Ability to defend diagnosis | | | |
| Ability to justify differential diagnosis | | | |
| Confidence | | | |
| Others | | | |

Signature of the Consultant In-charge

Guidelines for Post Graduate Training Programme for MD (Pediatrics)

MD

Programme Objectives

The goal of MD course in Pediatrics is to produce a competent pediatrician who :

- recognizes the health needs of infants, children and adolescents and carries out professional obligations in keeping with principles of National Health Policy and professional ethics.
- has acquired the competencies pertaining to pediatrics that are required to be effpracticed in the community and at all levels of health system.
- has acquired skills in effectively communicating with the child, family and the community.
- is aware of the contemporary advances and developments in medical sciences as related to child health.
- is oriented to principles of research methodology
- has acquired skills in educating medical and paramedical professionals.

Objectives

The objectives to be fulfilled at the completion of the course are as follows :

Knowledge

13. Understand importance of child health in context of health priority of the country.
14. Describe and monitor growth and development of children and identify deviations from normal.
15. Describe etio-pathogenesis, principles of clinical diagnosis, investigations and treatment of diseases of childhood.
16. Outline various childhood emergencies & their management
17. Develop an understanding of Basic (Pre and Para clinical) Sciences and its application to clinical practice
18. Identify and understand socio-economic environmental –cultural factors in health care.
19. Analyze clinical and investigation data to comprehensively manage a health related problem.
20. Plan comprehensive treatment for illness using principles of rational drug therapy.
21. Plan measures for prevention of childhood disease and disability.

22. Identify normal, 'at risk' and sick neonates
23. Provide care to normal, 'at risk' and sick neonates
24. Recognize problems requiring referral & identify pre-referral treatment.
25. Audit and analyze work, be conversant with basic principles of research methodology, assist in research and publishing of scientific articles.

Skills

7. Take detailed history, perform full physical examination including neurodevelopment & behavioral assessment and correlate to make a clinical diagnosis.
8. Perform relevant investigative and therapeutic procedures for the pediatric patient.
9. Interpret imaging and laboratory results.
10. Diagnose illness in children based on the analysis of history, physical examination and investigate work up.
11. Plan and deliver comprehensive treatment for illness in children using principles of rational drug therapy.
12. Provide emergency management to a sick child

Communication and Attitudes

6. Practice the speciality of Pediatrics in keeping with the principles of professional ethics.
7. Demonstrate empathy and humane approach towards patients and their families and keep their sensibilities in high esteem.
8. Demonstrate communication skills of a high order in explaining management and prognosis, providing counseling and giving health education messages to patients, families and communities.
9. Develop an attitude of being a self-directed learner, recognize continuing educational needs, use appropriate learning resources, and critically analyze relevant published literature in order to practice evidence-based pediatrics.
10. Function as a productive member of a team engaged in health care, research and education.

3. Syllabus

General Guidelines: During the training period effort must always be made that adequate time is spent in discussing child health problems of public health importance in the country or particular region.

3.2. Disorders (Definition, Epidemiology, etiopathogenesis, presentation, complications, differential diagnosis, and treatment).

3.2.21. **Growth and development.** Principles of growth and development, normal growth and development in childhood and adolescence, *growth & development monitoring*, deviations in growth and development, sexual maturation and its disturbances.

3.2.22. **Disorders of fluids & electrolytes:** Physiology of fluids, electrolytes and acid-basis, dehydration & fluid management, dyselectrolytemia, acid-base disorders

3.2.23. **Neonatology.** Perinatal care, normal newborn, care in the labor room and resuscitation, low birth weight, prematurity, newborn feeding, common transient phenomena, respiratory distress, apnea, infections, jaundice, anemia and bleeding disorders, neurologic disorders, gastrointestinal disorders, renal disorders, malformations, thermoregulation and its disorders, understanding of perinatal medicine.

3.2.24. **Nutrition.** Maternal nutritional disorders: impact on fetal outcome, nutrition for the low birth weight, breast feeding, infant feeding including complementary feeding, protein energy malnutrition, vitamin and mineral deficiencies, trace elements of nutritional importance, obesity. Adolescent nutrition, nutritional management in diarrhea, nutritional management of systemic illnesses (celiac disease, hepatobiliary disorders, nephrotic syndrome), parenteral and enteral nutrition in neonates and children.

3.2.25. **Cardiovascular.** Congenital heart diseases (cyanotic and acyanotic), rheumatic fever and rheumatic heart disease, infective endocarditis, arrhythmia, diseases of myocardium (cardiomyopathy, myocarditis), diseases of pericardium, systemic hypertension,.

3.2.26. **Respiratory.** Congenital and acquired disorders of nose, infections of upper respiratory tract, tonsils and adenoids, obstructive sleep apnea. Congenital anomalies of lower respiratory tract, acute inflammatory upper airway obstruction, FB in larynx, trachea and bronchi, subglottic stenosis (Acute & Chronic), trauma to larynx, neoplasm of larynx and trachea. Bronchitis, bronchiolitis, aspiration pneumonia, GER, Acute pneumonia, interstitial pneumonia, suppurative lung disease, atelectasis, lung cysts, emphysema & hyperinflation bronchial asthma, pulmonary edema, bronchiectasis, pleural effusion, pulmonary leaks, mediastinal mass.

- 3.2.27. ***Gastrointestinal and liver diseases.*** Diseases of mouth, oral cavity and tongue, Disorders of deglutition and esophagus, peptic ulcer disease, *H. pylori* infection, foreign body, congenital pyloric stenosis, intestinal obstruction, malabsorption syndrome, acute and chronic diarrhea, Irritable bowel syndrome, ulcerative colitis, Hirschsprung disease, anorectal malformations. Liver disorders: hepatitis, hepatic failure, chronic liver disease, Wilson's disease, Budd-Chiari syndrome, metabolic diseases of liver, cirrhosis, and portal hypertension.
- 3.2.28. ***Genitourinary disorders.*** Acute and chronic glomerulonephritis, nephrotic syndrome, hemolytic-uremic syndrome, urinary tract infection, VUR and renal scarring, renal involvement in systemic diseases, renal tubular disorders, congenital and hereditary renal disorders, renal and bladder stones, posterior urethral valves, hydronephrosis, voiding dysfunction, undescended testis, Wilm's tumor, fluid-electrolyte disturbances.
- 3.2.29. ***Neurologic disorders.*** Seizure and non seizure paroxysmal events, epilepsy and epileptic syndromes of childhood, meningitis, brain abscess, coma, acute encephalitis and febrile encephalopathies, Guillain-Barre syndrome, neurocysticercosis and other neuro-infestations, HIV encephalopathy, SSPE, cerebral palsy, neurometabolic and *neuro-degenerative* disorders, mental retardation, learning disabilities, muscular dystrophies, acute flaccid paralysis and AFP surveillance, ataxia, movement disorders of childhood, CNS tumor, malformations, *neuro-cutaneous disorders, diseases of spinal cord & neuro-muscular junction*
- 3.2.30. ***Hematology & Oncology.*** Deficiency anemia, hemolytic anemia, aplastic anemia/pancytopenia, disorders of hemostasis, thrombocytopenia, blood component therapy, transfusion related infections, bone marrow transplant / stem cell transplant, acute and chronic leukemia, myelodysplastic syndrome, Hodgkin disease, non-Hodgkin's lymphoma, neuroblastoma, Wilms tumor, hypercoagulable states.
- 3.2.31. ***Endocrinology.*** Hypopituitarism/hyperpituitarism, Diabetes insipidus, pubertal disorders, hypo- and hyperthyroidism, hypo- and hyperparathyroidism, adrenal insufficiency, *congenital adrenal insufficiency*, Cushing's syndrome, adrenogenital syndromes, diabetes mellitus, short stature, failure to thrive, *ambiguous genitalia*, pubertal changes and gynecological disorders, dyslipidemia.
- 3.2.32. ***Infections.*** Bacterial, viral, fungal, parasitic, rickettsial, mycoplasma, *Pneumocystis carini* infections, chlamydia, protozoal and parasitic, tuberculosis, HIV, nosocomial infections. Control of epidemics and infection prevention.
- 3.2.33. ***Emergency and critical care.*** Emergency care of shock, cardiorespiratory arrest, respiratory failure, congestive cardiac failure, acute renal failure, status epilepticus, fluid and electrolyte disturbances and its therapy, acid-base disturbances, poisoning, accidents, scorpion & snake bites.

3.2.34. **Immunology and Rheumatology.** Arthritis (acute and chronic), connective tissue disorders, disorders of immunoglobulins, T and B cell disorders, immunodeficiency syndromes.

3.2.35. **ENT.** Acute and chronic otitis media, conductive/sensorineural hearing loss, acute/chronic tonsillitis/adenoids, allergic rhinitis/sinusitis.

3.2.36. **Skin diseases.** Exanthematous illnesses vascular lesions, pigment disorders, vesicobullous disorders, infections: pyogenic and fungal and parasitic, Steven-Johnson syndrome, eczema, seborrhea dermatitis, drug rash, urticaria, alopecia, ichthyosis.

3.2.37. **Eye problems.** Refraction & accommodation, partial/total loss of vision, cataract, night blindness, chorioretinitis, strabismus, conjunctival & corneal disorders, ROP, retinoblastoma, optic atrophy, papilloedema.

3.2.38. **Behavioral and psychological disorders.** Rumination, pica, enuresis, encopresis, sleep disorders, habit disorders, breath holding spells, anxiety disorders, mood disorders, temper tantrums, attention deficit hyperactivity disorder, infantile autism.

3.2.19 Community and social pediatrics. *National Health Nutrition Programs, nutrition screening of community, prevention of blindness, School Health Programs, health legislation, adoption, child labor, juvenile delinquency, general principles of prevention and control of infections including food borne, waterborne, soil borne and vector borne diseases, investigations of an outbreak in a community, child labor, rights of the child, national policy of child health and population.*

3.2.39. **Genetics.** Chromosomal disorders, single gene disorders, multifactorial disorders/polygenic, genetic diagnosis, and prenatal diagnosis.

3.2.40. **Orthopedics.** Major congenital orthopedic deformities, bone and joint infections, Potts' spine, and common bone tumors.

3.4. Basic sciences

Embryogenesis of different organ system especially heart, genitourinary system, gastrointestinal tract, applied anatomy of different organs, functions of kidney, liver, lungs, heart and endocrinal glands. Physiology of micturition and defecation, placental physiology, fetal and neonatal circulation, regulation of temperature (esp. newborn), blood pressure, acid base balance, fluid electrolyte balance, calcium metabolism, vitamins and their functions, hematopoiesis, hemostasis, bilirubin metabolism, growth and

development at different ages, puberty and its regulation, nutrition, normal requirements of various nutrients, basic immunology, bio-statistics, clinical epidemiology, ethical and medico-legal issues, teaching methodology and managerial skills. Pharmacokinetics of commonly used drugs, microbial agents and their epidemiology.

Approach to important clinical symptoms/problems

- Fever with/without rash
- Chronic/recurrent fever
- PUO
- Protein energy malnutrition
- Chronic/recurrent cough
- Chronic diarrhea
- Vomiting
- Jaundice
- Chronic liver disease
- Organomegaly
- Ascites
- Anasarca
- Failure to thrive
- Short stature
- Delayed development
- Developmental regression
- Respiratory distress
- Wheezing
- Recurrent /persistent pneumonia
- Anemia
- Lymphadenopathy
- Bleeding disorder
- Murmur
- Cyanosis
- CHF
- Hypertension
- Hemiplegia
- Hematuria
- Paraplegia
- Monoplegia
- Quadriplegia
- Seizures
- Limp
- Floppy infant
- Large head

- Low birth weight neonate
- Preterm neonate
- Microcephaly
- Acute flaccid paralysis
- Obesity
- Thyroid enlargement
- Precocious puberty
- Delayed puberty
- Ambiguous genitalia

SKILLS

I. History and Examination

The student must gain proficiency in eliciting, processing and systematically presenting pediatric history and examination with due emphasis on the important and minimization of less important facts.

The following skills must be achieved :

8. Recognition and demonstration of physical findings
9. Recording of height, weight, head circumference and mid arm circumference and interpretation of these parameters using growth reference standards for assessment of nutritional status and growth.
10. Assessment of pubertal growth.
11. Complete development assessment by history and physical examination.
12. Systematic examination.
13. Neonatal examination including gestation assessment by physical and neurological criteria.
14. Examination of the fundus and the ear-drum.
15. IMNCI & IYCF

II. Monitoring Skills

Non invasive monitoring of vital functions including BP, , PR, RR, SPO₂. and heart-rate patterns (ECG)

III. Investigative Procedures

7. Venous, capillary and arterial blood sampling for investigations and sample collection using appropriate asepsis and universal precautions.
8. Pleural, peritoneal sub-dural tap, lumbar puncture, ventricular tap.

9. Tuberculin test.
10. Biopsy of liver and kidney.
11. Urethral catheterization and supra-pubic tap.
12. Gastric content aspiration
13. Bone marrow biopsy, pericardial tap

IV. Therapeutic Skills

13. Breast feeding assessment and counseling on appropriate technique of breast feeding and management of common problems associated with it.
14. Establishment of vascular access
15. Administration of injections using safe injection practices.
16. Determination of volume and composition of intravenous fluids and their administration.
17. Neonatal and Pediatric basic and advanced life support.
18. Oxygen administration, CPAP and nebulisation therapy.
19. Blood and blood component therapy.
20. Intra-osseous fluid administration,.
21. Phototherapy, umbilical artery & venous catheterization and exchange transfusion.
22. Nasogastric feeding.
23. Common dressings and abscess drainage.
24. Basic principles of rehabilitation.
Desirable: Peritoneal dialysis, venesection, tracheostomy, central venous cannulation and CVP monitoring, intercostal tube drainage, mechanical ventilation.

IV. Bed side investigations

8. Hb, TLC, micro ESR, peripheral smear.
9. Urine routine and microscopic examination, urine reducing sugar by Benedicts test.
10. Stool microscopy and hanging drop.
11. Examination of CSF and other body fluids.
12. Blood sugar
13. Shake test on gastric aspirate
14. Gram stain, ZN stain.

V. Patient Management Skills

6. Proficiency in management of all pediatric emergencies.
7. Drawing and executing patient management plan and long term care.
8. Documenting patient records on day to day basis and problem oriented medical record.
9. Care of a normal and sick newborn, management of neonatal disorders like hypothermia, sepsis, convulsions, jaundice, metabolic problems, etc.
10. Identifying need for timely referral to appropriate departments / health care facility & pre-transport stabilization of the sick child

VI. Interpretation of Investigations

8. Plain x-ray chest, abdomen, skeletal system
9. Contrast radiological studies: Barium swallow, barium meal, barium enema, IVP, MCU.
10. Ultrasound skull, abdomen.
11. Histopathological, biochemical and microbiological investigations
12. CT Scan / MRI skull.
13. ECG
14. ABG

Desirable: Interpretation of radio-isotope studies, audiogram, common EEG patterns, neuro-physiological studies, BERA, VER, EMG, NCV, CT/MRI abdomen and chest, respiratory function tests

VII. Communication Skills & Attitudes

6. Communicating with parents / child about nature of illness and management plan, prognostication., breaking bad news
7. Counseling parents on breast feeding, nutrition, immunization, disease prevention and promoting healthy life style.
8. Genetic counseling
9. Communication with colleagues, nurses and paramedical workers.
10. Appropriate relation with pharmaceutical industry.

VIII. Academic Skills

Familiarity with basic research methodology.

Planning the protocol of the thesis, its execution and final report.

Review of literature

Conducting clinical sessions for undergraduates medical students.

Desirable: Writing and presenting a paper, Teaching sessions for nurses and para medical workers.

Thesis

Objectives

By carrying out a research project and presenting his work in the form of thesis, the student will be able to:

- Identify a relevant research questions;
- Conduct a critical review of literature;
- Formulate a hypothesis;
- Determine the most suitable study design;
- State the objectives of the study;
- Prepare a study protocol;
- Undertake a study according to the protocol;
- Analyze and interpret research data; and draw conclusions;
- Write a research paper.

Guidelines

While selecting thesis topics, following should be kept in mind:

- The scope of study should be limited so that it is possible to conduct it within the resources and time available to the student.
- The emphasis should be on the process of research rather than the results.
- The research study must be ethically appropriate.
- The protocol, interim progress as well as final presentation must be made formally to the entire department.
- Only one student per teacher/thesis guide
- There should be periodic departmental review of the thesis work as per following schedule :
 - End of 1st year - Submission of protocol
 - During 2nd year - Mid-term presentation
 - 6 months prior to exam - Final Presentation and Submission

After submission of protocol, supervisor should send the information of work done by the candidates to the University every 6 months.

Evaluation of thesis

The thesis will be evaluated by two independent reviewers who shall grant marks out of 50 each. A minimum combined aggregate of 50% is a mandatory precondition for the postgraduate student to appear in the final examination.

General observations

- There should be a training program on Research Methodology for existing faculty to build capacity to guide research.
- Within 3 months of thesis submission the candidate should be communicated the acceptance/rejection of the thesis.

Log Book

During his/her training, the candidate should maintain a Log Book indicating the duration of the postings / work done in Paediatric Wards, OPDs and Casualty. It should indicate the procedures assisted and performed by the candidate, and the teaching sessions, symposia, journal club meetings, etc., attended.

The purpose of the Log Book is to :

4. Help to maintain a record of the work done during training.
5. Enable the consultant to have first hand information about the work done and to intervene whenever necessary.
6. Use it to assess the experience gained periodically.

The log book shall be used to aid the internal evaluation of the student.

TEACHING PROGRAMME

GENERAL PRINCIPLES

- Acquisition of practical competencies being the keystone of PG medical education, PG training should be skills oriented.
- Learning in PG programme should be essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort.

Acquisition of theoretical skills

- Self study
- Journal Club
- Seminars
- Lectures
- Inter-ward & inter-departmental case discussion
- CME Programmes for post-graduate students

Acquisition of Practical skills

- Bed-side teaching rounds
- NALS & PALS course
- Workshops on various subjects for examples : Assessment for growth & development, diarrhoea management, Ventilatory support, Communication skills etc.
- Clinico-radiological conference

It is desirable that at joining pediatric residency programme a post graduate student should attend the NALS & PALS courses and training in hospital waste management. A supervised training in practical procedure like blood sampling, I/V line insertion & other clinical procedures should be undertaken at the earliest opportunity. These should be supported by the videos where available. In addition, a series of orientation classes should be organized for them on subjects including common pediatric emergencies, fluid & electrolyte management etc. A suggested list of these classes is enclosed (Annex 1).

Formal teaching sessions

In addition to bedside teaching rounds, at least 5 hours of formal teaching per week are a must. The departments may select the activities from those mentioned above.

ASSESSMENT

General Principles :

- The Assessment should valid, objectives, and reliable.
- It must cover cognitive, psychomotor and affective domains.
- Formative, and summative assessment should be conducted in theory as well as practical/clinicals. In addition, thesis should be assessed separately.

Formative (Internal Assessment)

Objective

- Providing feedback to the students
and
- Contribute towards final evaluation (20% of total score)

Fields of Assessment

- | | |
|------------------------------------|--------------------------------------|
| 1. Personal attributes | Ongoing after each clinical posting. |
| 2. Clinical skills and performance | -do- |
| 3. Academic activities | -do- |
| 4. Theory Exams | |
| 5. Practical Exams | |

I. Theory Assessment

The theoretical knowledge shall be assessed by means of written exams at the end of 1st year, 2nd year & sent up examination (at 2 yrs. 9 months.)

Marks for theory exams (Total maximum marks = 200)

| | |
|---------------------|----------|
| I year end | MM = 50 |
| II Year end | MM = 50 |
| Sent-up examination | MM = 100 |

II. Practical Assessment (Total maximum marks = 200)

| | | |
|----------|--|----------|
| I Year | OSCE | MM = 40 |
| II Year | OSCE & One case | MM = 60 |
| III Year | OSCE & three cases (like main exam) | MM = 100 |

Other Evaluation

6. Academic Presentations
7. Scientific Excellence
8. Skill Proficiency
9. Personal attributes
10. Teaching activities

The above fields shall be graded on a scale of 1-5 (see annexures). The academic presentations shall be graded at the time of presentation by the Consultant in-charge. Evaluation on points 2 to 5 shall be done by the Unit in-charge at the end of every semester. A sample of the evaluation proforma for all the above points is presented in Annexures 2-5.

Summative Assessment

The theory paper & the practicals shall be marked instead of current practice of granting grades. The evaluation of theory papers shall be done independently before the commencement of practical examination.

- Ratio of marks in theory and practicals will be equal
- The minimum percentage require to pass will be 50%
- Candidate will have to pass theory and practical exam separately.
- Internal evaluation shall contribute towards 20% of total score

I. Theory (Total Maximum Marks = 200)

| | | |
|-------------|--|---------|
| Paper 1: | Basic sciences as applied to pediatrics & community pediatrics. | MM = 50 |
| Paper 2 : | Neonatology | MM = 50 |
| Paper 3 : | General pediatrics including advances in pediatrics relating to Cluster-I specialities | MM = 50 |
| Paper 4 : | General Pediarics including advances in pediatrics relating to Cluster-II specialities | MM = 50 |
| Cluster- I | Nutrition, Growth and development, Immunization, Infectious disease, Genetics, Immunology, Rheumatology Psychiatry and Behavioral Sciences, Skin, Eye, ENT, Adolescent Health, Critical Care, Accidents and Poisoning. | |
| Cluster- II | Neurology and disabilities, Nephrology, Hematology-oncology, endocrinology, Gastroenterology and Hepatology, Respiratory and cardiovascular disorder. | |

In each paper there should be 10 short essay questions (SEQ)

II. Practicals (Total Maximum Marks = 200)

1. 3 cases of equal weightage carrying 40 marks each

Desirable distribution of cases :

Case I – Neonate

Case II – Child upto 4-5 Years

Case III – Child more than 5 years.

3. OSCE

The OSCE shall consist of 10 stations of 8 marks each. It shall consist of 6 observed stations (1 by each examiner) & 4 unobserved stations.

The observed stations shall assess the students on the following skills.

- NALS/PALS
- Assessment of growth & development
- Communication/Counseling skills
- History taking
- Examination
- Procedural skills

The unobserved stations shall check the analytic skills of the students for example : Interpretation of laboratory investigations, ABG/ECG, Radiological investigations.

111 Internal assessment (Total maximum marks=100):

Theory: 50 marks

Practical 50 marks

Annex 1

Orientation sessions for Residents joining post-graduation in Pediatrics

Common for all Residents of the Institute

- Orientation to the Hospital : Various Departments & facilities available
- Communication skills : Patients & Colleagues
- Literature search
- Basic research methodology
- Protocol writing & thesis

For Pediatrics Residents

- Introduction to residency in Pediatrics
- Universal Precautions and Appropriate Disposal of Hospital Waste
- Management of Shock
- Congestive Cardiac Failure
- Normal Fluid & Electrolyte Requirement
- Disorders of Fluid & Electrolyte Balance
- ABG Interpretation & Management of Disorders of Acid-Base Balance\
- Neonatal Seizures
- Evaluation of a sick newborn
- Management of Hypothermia and Hypoglycemia in the Newborn
- Management of Seizures & Status Epilepticus
- Management of Comatose Patients
- Hospital Management of Severe PEM
- Acute Renal Failure
- Fulminant Hepatic Failure
- Approach to a child with respiratory distress & initial management
- Management of Acute Diarrhoea
- Approach to a Bleeding Child and its Management
- Rational Antibiotic Therapy

Annex 2

End of year evaluation of the post graduate students

Name of the Student _____

Year 1 / 2 / 3

Place of Posting: _____ From _____ / To _____

_____ From _____ / To _____

_____ From _____ / To _____

1. Skill Proficiency*

| | Posting1 | Posting2 | Posting3 |
|--|----------|----------|----------|
| Attendance in academic activities | | | |
| Performance in ward procedures | | | |
| Performance in emergency procedures | | | |
| Performance in neonatology procedures | | | |
| Handling of equipments | | | |
| Performance in laboratory procedures | | | |
| Decision making/formulation of management plan | | | |
| Record writing | | | |
| Administration | | | |
| Leadership qualities | | | |

2. Personal Attributes*

| | Posting1 | Posting2 | Posting3 |
|--|-----------------|-----------------|-----------------|
| Availability (punctual, available on duty, responds promptly to calls, takes proper permission for leave) | | | |
| Sincerity & Motivation (dependable, honest, admits mistake, does not cook up information, exhibits good moral values, loyal to institution, takes initiative & responsibility, keen desire to learn) | | | |
| Diligence & performance (dedicated, hard working, does not shirk duties, leaves no pending work, does not sit idle. Competent in clinical case, skilled in procedure & file work) | | | |
| Academic ability (intelligent, shows sound knowledge/skills, participates in academic activities, self-learning ability) | | | |
| Interpersonal skills (compassionate attitude to patients, gets along well with colleagues, paramedics and respectful to seniors) | | | |

*Grading of proficiency & personal attributes: On a scale of 1 to 5

1: Poor

5:Excellent

3. Scientific Excellence

- Awards
- Publications
- Conference paper presentations
- Attendance at C.M.E., Workshop, Symposium

4. Teaching Activities

- Health talks for parents/patients
- Under graduate clinical sessions
- Classes for nurse & paramedical workers

Signature of the Unit In-charge

Annex 3

Evaluation Sheet – Journal Club

Name of the Student _____

Date of Presentation _____

| Points to be considered | Excellent | Meets Expectation | Below Expectation |
|--|------------------|------------------------------|------------------------------|
| Choice of article | | | |
| Cogency of presentation | | | |
| Critical review | | | |
| Whether cross-reference and other relevant publications consulted. | | | |
| Audio-Visual aids | | | |
| Interaction | | | |

Signature of the Consultant In-charge

Annex 4

Evaluation Sheet – Seminar/Review/Protocol/Thesis

Name of the Student _____

Date of Presentation _____

| Points to be considered | Excellent | Meets Expectation | Below Expectation |
|-----------------------------------|------------------|--------------------------|--------------------------|
| Presentation | | | |
| Completeness of preparation | | | |
| Cogency of presentation | | | |
| Use of Audio-Visual aids | | | |
| Understanding the subject | | | |
| Ability to answer questions | | | |
| Time scheduling | | | |
| Consulted all relevant literature | | | |

Signature of the Consultant In-charge

Annex 5

Evaluation Sheet – Clinical Case Presentation

Name of the Student _____

Date of Presentation _____

| Points to be considered | Excellent | Meets Expectation | Below Expectation |
|--|------------------|--------------------------|--------------------------|
| Logic Order | | | |
| Completeness of history | | | |
| Cogency of presentation | | | |
| Whether all relevant points elicited | | | |
| Mentioned all positive/negative points of importance | | | |
| Accuracy of general physical examination | | | |
| Whether all physical signs elicited correctly | | | |
| Whether any major sign missed or misinterpreted | | | |
| Diagnosis : whether it follows logically from history & findings Management <ul style="list-style-type: none">• Completes list of investigations• Relevant order• Interpretation of investigations• Treatment principles & details | | | |
| Ability to reach to questioning-whether answers relevant and complete | | | |
| Ability to defend diagnosis | | | |
| Ability to justify differential diagnosis | | | |
| Confidence | | | |
| Others | | | |

Signature of the Consultant In-charge