"This prospectus is made under the provisions of the Universities Act, the Postgraduate Institute of Medicine Ordinance, and the General By-Laws No. 1 of 2016 and By-Laws No. 2 of 2016 for Degree of Doctor of Medicine(MD) and Board Certification as a Specialist"

POSTGRADUATE INSTITUTE OF MEDICINE

UNIVERSITY OF COLOMBO

Prospectus

Board Certification in Paediatric Neurology

(To be effective from the year 2015)

TABLE OF CONTENTS

Prospectus		**Page**
1	Nomenclature	
2	Background/Introduction	
3	Eligibility for entry into training programme	
4	Selection process	
5	Number to be selected for training	
6	Guidance through the training programme	
7	Outcomes and learning objectives	
8	Content areas and curriculum	
9	Structure of training programme	
10	Research project	
11	Learning activities and learner support system	
12	Trainers and training units	
13	Monitoring of progress	
14	Eligibility for Pre–Board Certification Assessment (PBCA)	
15	Format of PBCA	
16	Recommended reading	
17	Contributors to development and revision of prospectus	
ANNEXES		
i	Curriculum and content area	
ii	Progress report	
iii	In-service training assessment forms	
iv	Authentication of learning activities	
v	Portfolio	

1. Nomenclature

1.1 Name of the Degree Programme

Subspecialty training in Paediatric Neurology

1.2 Full Title

Board Certified Specialist in Paediatric Neurology

1.3 Abbreviated Title

MD(Paed)BC in Paediatric Neurology

1.4 University

University of Colombo, Sri Lanka

1.5 Faculties and Institutes

Postgraduate Institute of Medicine

1.6 Departments, External Resources and Associated Agencies

Board of Study in Paediatrics, Ministry of Health, Sri Lanka College of Paediatricians, Association of Neurologists of Sri Lanka, Faculty of Medicine, University of Colombo, Sri Lanka

2. Background and introduction

The Board of Study in Paediatrics (BOSP), from its inception in 1980, has endeavoured meticulously to train and provide our country with well trained Board Certified Specialists in General Paediatrics. These Board Certified Specialist General Paediatricians provide specialist paediatric services in all areas of the country.

Although general paediatricians are able to provide optimal cover for the majority of clinical problems in paediatrics, ultra-specialist care and high-powered services are required in certain well defined specialised areas. Since 2004, the BOSP has commenced training programmes for different sub-specialties in paediatrics.

It has been estimated that a substantial proportion of the workload of a paediatric unit in Sri Lanka involves neurological diseases. The picture reported globally is similar, but is slightly higher in proportion for certain neurological disorders such as central nervous system infections and cerebral palsy. Another common neurological disorder of note is childhood epilepsy affecting 8-9 per 1000children. A postgraduate training program in paediatric neurology has been in effect since 2004.

This document is the final proposal for improvement of the current training program in Paediatric Neurology as a sub-specialty leading to Board Certification as Paediatric Neurologist. It has taken into account the many different, but inter-related, aspects of neurology.

3. Eligibility to enter into the training programme

The applicant should have passed the MD Paediatrics examination. The candidate should not be already Board Certified in any medical field or have already applied to be enrolled in the training programme in any other subspecialty.

4. Selection process

The training opportunities are offered according to the availability of training slots/units, trainers, and as recommended by the BOS. The availability of training slots will depend on the Ministry of Health/University requirements. Allocations will be done strictly according to the merit order based on the results of the MD Paediatrics examination.

5. Number to be selected for training

The number of candidates will be decided by the Ministry of Health each year. Refer the general paediatric prospectus for selection criteria for subspecialties.

6. Guidance to the training programme

Once the selection is made the candidate will come under the general purview of the special committee of the BOS paediatrics that deals with paediatric neurology.

Mentor/Program Director: An individual should be identified who will guide the trainee through all three years of this curriculum. The mentor should be a child neurologist intimately involved with training the candidate, and should be of sufficient professional stature and clinical expertise to serve as a role model and teacher. Additional mentors in subspecialty fields should also be identified. This individual (or group) is important for encouraging learning and scholarship.

7. Outcome and learning objectives

7.1 Outcomes

The aim of the program is to produce fulltime specialists in paediatric neurology. The Paediatric Neurologist is expected to provide a specialty service to those children who need expert care in the management of their neurological disorders that are prevalent in this country. The range of the functions of the said specialist would also include cooperating with and assisting other paediatric sub-specialities as well as general paediatrics. The services of the Paediatric Neurologist may be required not only for the severely ill patients with neurological problem as well as for special complex cases of what are generally thought to be relatively mild neurological problems. This service also includes interpretation of investigations that would require the expertise of a paediatric neurologist.

7.2 Learning objectives

7.2.1 acquire a sound knowledge in basic sciences related to neurology and the changes during the different phases of life

7.2.2 acquire an extensive knowledge of the patho-physiological processes of diseases of the nervous system

7.2.3 develop skills in the diagnosis and management of pathological states presenting in paediatricneurology practice (this is detailed in annex 1)

7.2.4 develop correct attitudes for good clinical practice.

7.2.5 develop the skills required for the organization of paediatricneurology services and evaluate its outcome

7.2.6 develop the skills required to conduct audits and scientific research, with a view to contributing to scientific knowledge in this field

7.2.7 participate in the task of improving the paediatric neurology services in the community

7.2.8 develop the skills required to be a medical teacher / resource person in order to impart medical education to medical personnel and the public.

7.2.9 develop the ability to critically appraise research publications and practice evidence based medicine

7.2.10 develop the ability to maintain the highest standards of professionalism, moral and ethical conduct

7.2.11 cultivate the commitment to engage in continuing professional development

8. Content areas and Curriculum

Details of the curriculum and the content areas are given in *Annex I.*

9. Structure of the Training Programme

9.1 Duration of training programme

- Total duration training - 3 years
- This consists of 2 years of local training and at least 1 year of overseas training in a centre of excellence.

9.2 Clinical training programme (local training)

9.2.1 Overview

The selected trainee would be appointed as a Senior Registrar for a period of 2 years to a paediatric/ adultneurology unit approved by the BOS. From this substantive appointment, the trainee would be sent to other approved training units for the other components of local training. Some of these outreach

appointments are full time while others are part time. The trainee is expected to participate in all activities of the unit, particularly in those that are directly related to paediatricneurology.

9.2.2 Learning activities and training units for local training

The local training units are listed below.

Training component	Duration
Adult neurology- NHSL	6 months
PaediatricNeurology– six months rotation under 02 neurologists	12 months
Neurophysiology- NHSL	6 weeks
Intensive Care Unit PICU LRH	6 weeks
Radiology – Army Hospital/LRH	4 weeks
Neuro-rehabilitation -LRH	4 weeks
Neurosurgery - NHSL/ LRH	2 weeks
PaediatricPsychiatryand child guidance- LRH	2 weeks
ENT* LRH	2 weeks
PaedOphthalmology* LRH	2 weeks
Neuroanatomy (Faculty of Medicine, Colombo?)**	Duration?
Neuropharmacology / Neurochemistry **	Minimum 5 presentations

*to be covered during the rehabilitation rotation

** to be covered at any time during the local training – please refer to section under learning activities for details.

9.3 Clinical training program (Overseas training)

The overseas component of training should be with hands-on experience in a centre/s of excellence. The selected training centre/s has to be approved by the BOS in Paediatrics.

It is expected that the trainee would be able to gain valuable experience in all aspects of neurological disorders in such a centre. This will include the use of sophisticated facilities for diagnosis and follow-up of patients with neurology problems.

Such exposure and training would enable them to deal adequately with the many types of childhood neurology problems that he or she is likely to encounter in Sri Lanka.

10. Research project

Successfully carrying out a research project, directly relevant to Paediatric Neurology, is a mandatory requirement that needs to be fulfilled to be eligible to appear for the Pre-Board Certification Assessment (PBCA). The Research Project could be undertaken at any time, either in Sri Lanka or abroad during the neurology training period. The candidate should be directly involved in, and be personally responsible for, every component of the research project. If any component has not had the candidate's input the project will be disqualified.

All aspects of the study have to be assessed and deemed to be satisfactory by the BOSP before embarking on the proposed study. Towards that end, a comprehensive project proposal should be submitted to the Board of Study in Paediatrics, and approval obtained prior to commencing the study, including recruitment of patients and data collection.

Help from the Research Support Sub-Committee and The Research Sub-Committee of the BOSP may be obtained before submitting the finalised project proposal to the BOSP. The draft proposal should be all-inclusive and detailed with all relevant particulars being included. The supervisor would be the trainerin whose unit the work is to be carried out.

The project, once completed, should be submitted as a completed research report along with a soft copy and evidence of publication or oral/poster presentation to be assessed and approved by the BOSP. The publication should be a first author publication in a journal and the oral/poster presentation should be as first author in a scientific meeting, local or overseas, approved by the BOSP.

The trainee has to provide documentary proof of oral/poster presentation and publication of the research project to the BOSP. The documentation includes signed letters from the Scientific Congress and/or the journal concerned.

Please refer to the General Paediatrics Prospectus for the following:

- Format for submission of the research proposal
- Format for submission of the research report
- Assessment & marking scheme of project proposal by reviewer
- Scientific meetings for presentation and journals for publication of research

11. Learning activities and learner support system

Much of the learning would be based in the clinical settings and should be supported by formal learning activities. Text book and journal oriented theory knowledge, theory and practical knowledge of special equipment, patient oriented discussions, tutorials, small group discussions, cyber learning etc., will support learning.

Suggested formal learning activities:

- *Seminars and Conferences*- As a part of both the basic and clinical curriculum, trainees should attend and have progressively increasing responsibility for attending, organizing and being resource persons at regular conferences including clinical case discussions, journal clubs, grand rounds, didactic courses and meetings of local, regional, national and international neurological societies and also those pertaining to relevant basic and applied sciences.

  Learning activities conducted by local universities: lectures, group discussions, brain dissections. Topics- neuroanatomy, neurophysiology, neuropharmacology. Trainer and the trainee should liaise with the local universities to facilitate these.

12. Trainers and Training Units

- Teaching will be done by trainers approved by the BOSP, and resources such as wards, clinics, intensive care units, special care baby units, operating theatres, skills laboratories, information technology facilities, libraries and any other resources deemed necessary by the BOSP will be used as learning resources and tools. Regular case discussions, journal clubs and audit meetings need to be held.

- The current panel of Board Approved Trainers who are Board Certified Consultants with MD or those with foreign qualifications who have Privileges of Board Certification with employment in the Ministry of Health or the Universities would carry out the training locally. Foreign training would be carried out by recognised Consultants in Centres of Excellence.

13. Monitoring of progress

13.1 Progress Reports

Each completed section of the training programme should be followed by the submission of a Progress Report by the Supervisor / Trainer. These reports should be received by the PGIM within one month of completing the relevant section of training.

The onus of ensuring that these reports are sent in time to the PGIM is entirely on the trainee. They should liaise with the trainers and make sure that the reports are received by the PGIM in time. This includes local as well as foreign training. *Refer Annex II for progress reports.*

13.2 In Service Training Assessment (ISTA) during local training

The trainee is expected complete following assessments during this period.

- Multisource Feedback (MSF)- 3
- Directly Observed Practical Skills (DOPS)- 8
- Case based Discussions (CBD)-12 minutes per CBD -14
- Mini Clinical Evaluation (MCE) - 4
- Discharge Summaries & Letters (DSL) –8
- Evaluation of Teaching Skills- (ETS)- 3
- Communication Skills (CS)- 5

Refer Annex III for ISTA assessment forms

Training component	Duration
Adult neurology	DOPS (2), CBD (4), MCE (2), MSF (1)
Paediatric Neurology	CBD (8), MSF (2), ETS (3) DSL (8), CS (3), MCE (2), DOPS (2)
Neurophysiology	DOPS (2)
Intensive Care Unit	DOPS (2), CS (1)
Rehabilitation	CBD (1), DSL (1),
Child Psychiatry	CBD (1), CS (1)

The trainee should provide proof of completion of all learning activities of the training programme. *(Refer Annex IV)*

14. Eligibility for Pre-Board Certification Assessment (PBCA)

The following criteria have to be fulfilled to be eligible to appear for the PBCA.

- Satisfactory completion of all components of training
- Successful completion, presentation and publication of the Research Project/s

15. Format of Pre-Board Certification Assessment (PBCA)

Assessment tool- Portfolio

The PBCA should be based on assessment of portfolio maintained by the trainee during the period of post MD training. Content of the portfolio should encompass all of learning outcomes mentioned below and contains evidence of achievement of these outcomes by the trainee.

1. Subject expertise
2. Teaching
3. Research and Audit
4. Ethics and medico legal issues
5. Information technology
6. Lifelong learning
7. Reflective practice

Refer annex V for details

Portfolio Assessment

When the trainee is eligible for PBCA three (3) copies of the completed portfolio should be submitted to the examination branch of PGIM. The PBCA should take the form of a final, summative assessment of the trainee's portfolio, carried out by two independent examiners from the relevant subspecialty, appointed by BOS and approved by the Senate of the University of Colombo.

The portfolio will be marked by the examiners using the rating scale (*refer Annex V*).The candidate will have to secure a minimum of 5 or more for all seven (7) components mentioned above at each examiner's assessment.

The trainee will be called for a Viva voce examination during which he/she will be questioned on the portfolio. A third examiner will be nominated by the BOS from outside the discipline to improve objectivity. (For Portfolio Assessment Report - *refer Annex V*)

PBCA failed candidate

- A trainee who fails on the Portfolio assessment will be advised in writing by the panel on exactly how the portfolio could be improved. In such a case, the necessary corrections and amendments have to be made by the trainee and the portfolio submitted to the PGIM within 3-6 months to be assessed by same panel of examiners and a viva voce based on the resubmitted portfolio. A trainee, who still fails, would undergo a third portfolio evaluation and viva voce by a different panel of examiners appointed by the BOS within two months.
- If the trainee is successful at the second assessment and viva voce, the date of Board Certification will be backdated as done routinely. **If unsuccessful even at the second evaluation, the date of Board certification will be the date of passing the subsequent PBCA following further training for a minimum period of 6 months in a unit selected by the BOS.**

16. Board Certification

A trainee who has successfully completed the PBCA is eligible for Board Certification as a specialist in Paediatric Neurology on the recommendation of the BOS in Paediatrics.

The trainee is required to do a power point presentation of 10- 15 minutes, to the BOS which should be based on local and overseas training received, together with a component indicating the future mission and vision of the trainee.

17. Recommended reading

Textbooks

- Neurological Differential Diagnosis by John P Patten
- Clinical Pediatric Neurology: A Signs and Symptoms Approachby Fenichel
- Pediatric Neurology: Principles and Practice by Swaiman
- Child Neurology by Menkes
- Diseases of the Nervous System in Childhood by J Aicardi
- Neurology of Hereditary Metabolic Disease of Children by Lyons, Kolodny, Pastores
- The Treatment of Epilepsy: Principles and Practice by Wyllie and Gupta
- Epileptic Syndromes in Infancy, Childhood and Adolescence: Current Problems in
- Epilepsy by Dravet, Roger, Bureau et al
- Neonatal Neurology by Volpe
- Pediatric Neuroimaging by Barkovich
- Paediatric Neurology (Oxford Specialist Handbooks in Paediatrics) - edited by Rob Forsyth and Richard Newton
- Niedermeyer's Electroencephalography: Basic Principles, Clinical Applications, and
- Related Fields.

Journals

- Journal of Child Neurology –Sage
- Pediatric Neurology -
- Developmental Medicine and Child Neurology -Wiley

- Seminars in Pediatric neurology- Elsevier
- European Journal of Paediatric Neurology –Elsevier

18. Contributors to Development and Revision of Prospectus

Many members of the Board of Study in Paediatrics have contributed extensively of their time and professional expertise in the design and development of this curriculum document. This manuscript was prepared by a Sub-Committee appointed by the BOSP.

The members of the Sub-Committee are: -
Prof. R. Gamage (Chairman), Dr. Jithangi Wanigasinghe (Convener), Dr. Pyara Rathnayake, Prof. M P Senanayake and Prof. D Samarage.

The following members, in particular, deserve specific mention for their contribution:
Dr. Jithangi Wanigasinghe and Dr. Pyara Rathnayake

Annex I

CURRICULUM CONTENTS

A. Basic neurosciences*
   1. Neuroanatomy
   2. Neurophysiology
   3. Neuropathology
   4. Neuropharmacology / Neurochemistry

B. Applied neurology and neurosciences*
   1. EEG/Evoked potentials
   2. EMG/NCS; muscle biopsy, nerve biopsy
   3. Neuroradiology / Neuroimaging

C. Concepts essential to the child neurology trainee (should be presented in the basic and clinical curriculum)
   1. Brain and spinal cord development / embryology
   2. CNS plasticity
   3. Normal infant and child development
   4. Genetic principles
      a. Mendelian genetics
      b. Molecular genetics
      c. Dysmorphology / syndrome recognition
      d. Chromosomal disorders
      e. Mitochondrial disorders
   5. Brain death and the persistent vegetative state in infants and children
   6. Neuroepidemiology and statistics
   7. Bioethics*
   8. Awareness of cost-effectiveness of evaluation and treatment
   9. End-of- life issues*
      a. Terminal and palliative care
      b. Pain relief
      c. Psychological support for patient and family
   10. Evaluation of published literature and research methodology.

D. Clinical competencies

The clinical content of the curriculum should facilitate learning clinical adult and clinical childneurology in the broadest sense. That is, trainees should be exposed to and be responsible for patients with a comprehensive and representative variety of neurological disorders. There should be a concerted effort to correlate information with relevant applied and basic science information.

a. History taking**

The patient history is the cornerstone of diagnosing and treating neurological disorders. Many such disorders are not observed by the physician because episodes are intermittent or complaints are subjective. Furthermore, the circumstances preceding and following certain events are important for fully understanding the event or symptom. Therefore, the neurologist and childneurologist must be a consummate historians.

b. Neurological examination**

Many neurological symptoms are accompanied by signs observable by the careful examiner. Infact, patients are often unaware of physical abnormalities that yield clues to a diagnosis. Thus, a careful physical and neurological examination is an essential extension of the history that must never by overlooked or downplayed. The neurological examination is often more sensitive than any ancillary diagnostic procedure in localizing lesions and determining diagnoses.

Complete familiarity with the following is essential:

1. Higher cortical function (normal, confusion, delerium, dementia)
2. Cranial nerves
3. Motor function
4. Sensation
5. Reflex function
6. Cerebellar function
7. Gait and stance
8. Special circumstances
    a. The comatose patient
    b. The psychiatric patient

9. Developmentally appropriate application of above principles to neonates, infants and children of all ages.

c. Lesion (anatomic) localization and pathophysiologic correlation**

The logical result of a careful history and physical examination, lesion localization is of the utmost importance in leading the clinician toward a reasonable differential diagnosis and formulation of a plan for ancillary diagnostic procedures, if necessary.

Understanding normal neurophysiology is essential to explaining the basis of disease. At minimum, working knowledge of the anatomy, and physiology of the following sections (C1 to 13) is essential:

c.1) Motor system (motor unit and corticospinal tract)

a. Differentiate between disorders causing weakness, in coordination, and involuntary movements

b. Differentiate between upper motor neuron and lower motor neuron dysfunction by using the distribution of weakness, muscle bulk, muscle tone, muscle strength, fasciculations, sensory changes, and reflex changes

c. List the components of the motor unit

d. Compare and contrast the common LMN clinical syndromes involving motor neuron, peripheral nerve, neuromuscular junction, and muscle by symptoms of weakness, muscle bulk, muscle tone, muscle strength, fasciculations, sensory changes, reflex changes, and muscle enzymes.

e. Differentiate between the common UMN syndromes of hemiparesis, paraparesis,andquadriparesis by distribution and define and discuss the pathophysiology of:

Spasticity

Superficial and deep reflexes

Tone

Dexterity and motor planning

f. Differentiate between UMN and LMN facial weakness (Bell palsy)

g. Brachial plexopathy

c. 2) Basal ganglia

Define and differentiate involuntary movements:

Tremor (resting, postural, action)

Spasticity vs. rigidity

Hyperkinetic movement disorders

Chorea, athetosis, ballismus

Dystonia

Myoclonus

Tics

Hypokinetic movement disorders

c.3) Cerebellum

a. *Discuss the clinical findings and pathophysiology for midline vs. hemispheric cerebellardisorders*
b. *Define ataxia, dysmetria, dysdiadochokinesia, titubation*
c. *Define wide-based gait and discuss anatomical localization*

c.4) Sensory pathways

a. *Differentiate between central and peripheral sensory disorders by distribution, modalities affected, associated findings, and the presence or absence of pain*
b. *Describe the following sensory disorders and discuss localization:*
   Coritcal sensory loss
   Hemihypesthesia
   Thalamic pain
   Sensory level
   Brown-Sequard syndrome
   Dissociated sensory loss
c. *Describe these peripheral sensorimotor disorders and discuss localization:*
   Radiculopathy
   Mononeuropathy, polyneuropathy
   Stocking-glove distribution of sensory loss

Anesthesia, hypesthesia, paresthesia, dysesthesia

Brachial plexopathy

c. 5) Cranial nerves

Know the location of the cranial nerve nuclei and the pathways and therein be able to localize the pathology using knowledge about clustering of cranial nerve involvements in relation to other neurological signs. This includes familiarity with the blood supply to the brain stem and related structures with ability to recognize common vascular syndromes.

(eg: cerebellar pontine angle lesions, lesion in the cavernous sinus, Spueroirorbilatl fissuresions, lateral medullary syndrome, medial medullary syndrome, pontine syndromes, midbrain syndromes, inter nuclear opthalmolegia and other medial longitudinal fasciculus syndromes)

Know the functions and testing methods of each cranial nerve

1. **CN 1 : Olfaction**

2. **CN2** :Visual acuity,Colour vision,Visual fields and significance of patterns of visual filed defects,Visual extinction
   Be familiar with opthalmoscopic examination

3. **CN 3: pupillary responses (cn II, III),**
   - Direct and consensual responses to light reflex,
   - Accommodation
   - Swinging flashlight test (afferent papillary defect)
   - Argyll-Robertson (near light dissociation) pupils, Horner's syndrome, Parinaud's syndrome

4. **CN 4: extraocular movements (CN III, IV, VI)**
   Know the innervation and the movements related to each extra ocular muscle
   Perform and interpret
   - Smooth pursuit: H-test
   - Convergence
   - Saccades
   - Oculo-*cephalic and caloric testing*

5. **CN V**

   - Tactile and corneal sensations
   - movements of muscles of mastication
   - Jaw jerk reflex

6. **CN VII**
   - Know the difference between upper and lower motor neuron facial palsy.
   - Know the features of lower motor neuron palsy at different levels

7. **CN VIII Know the interpretation of**
   Rinne and Weber tests
   vestibulo-ocular reflex
   caloric testing

8. **CN IX, X**
   Interpretation of abnormal palatal and tongue movements, gag reflex and taste on posterior part of tongue

9. **CN XI perform and interpret functions**
   Shrug shoulders, turn head in both directions, flex neck when supine

10. **CN XII**
    Identify upper and lower motor neuron problems using Atrophy or fasciculation spasticity and deviation of the tongue.

c. 6) Hypothalamus and pituitary

Be familiar with manifestaionst of common lesions in this region such as craniopharnygioma and hypothalmichamartoma including manifestation as epilepsy.

Know features of and conditions associated with hypo and hyperpituitarism

Know features of a space occupying lesion in the region due to involvement of thevisual pathways, with field defects and visual loss (most common), the cavernous sinus, with III, IV and VI cranial nerve lesions, bony structures and the meninges surrounding the fossa, causing headache, hypothalamic centres: altered appetite, obesity, thirst, somnolence/wakefulness or precocious puberty, the ventricles, causing interruption of cerebrospinal fluid (CSF) flow leading to hydrocephalus, the sphenoid sinus with invasion causing CSF rhinorrhoea.

c. 7) Limbic system

- Know the components of the limbic system
- Be familiar with manifestations limbic system dysfunction
- Know the common syndromes of limbic dysfunction :*Klüver*–Bucy syndrome, Limbic encephalitis, hippocampal epilepsy

c. 8) Cerebral cortex

Ability to asses and know the significance of dysfunction related to localization and causation

Alertness and orientation, attention and cooperation
Concentration and memory
Logic and abstraction
Sequencing tasks, neglect and construction
Language and calculation including reading and writing
Apraxia
Frontal Release
Hallucinations and delusions
Mood

c. 9) Visual system

a. *Localize the lesion causing:*
    - Homonymous hemianopsia (congruent, non-congruent)
    - Bitemporal field defect
    - Superior and inferior quadrantanopsia
    - Enlarged blind spot
    - Afferent pupillary defect
b. *Differentiate between papilledema and optic neuritis*
c. *Describe innervation and action of each of the extra-ocular muscles*
d. *Describe anatomy of Parinaud's (dorsal midbrain) syndrome*
e. *Distinguish between supranuclear gaze and palsy and nuclear/intranuclear palsy*
f. *Describe nystagmus (jerk, pendular)*
g. *Evaluate ptosis, including Horner's syndrome*

c.10) Auditory system

Be able describe the antomy and functioning of the auditory apparatus

Know the central connections of the auditorysystem (Cochlear Nucleus, Superior Olive, Lateral Lemniscus, Inferior Colliculus, Medical Geniculate, Superior Temporal Gyrus)

Be able to distinguish between sensory neural and conductive hearing loss

c. 11) Autonomic system

- Compare and contrast the anatomical features of the sympathetic and parasympathetic systems;
- Explain how various regions of the central nervous system regulate autonomic nervous system function;
- Explain how autonomic reflexes contribute to homeostasis;
- For each neurotransmitter in the autonomic nervous system, list the neurons that release them and the type and location of receptors that bind with them;
- Describe the mechanism by which neurotransmitters are removed;
- Distinguish between cholinergic and adrenergic receptors;
- Describe the overall and specific functions of the sympathetic system;
- Describe the overall and specific functions of the parasympathetic system; and
- Explain how the effects of the catecholamines differ from those of direct sympathetic stimulation.
- Know the common syndromes of autonomic dysfunction
  Eg : Horners syndrome with different manifestations with ;lesions at different levels, familial dysautonomia, orthostatic hypotension

c.12) Cerebrospinal fluid pathways

Be familiar with

CSF pathways

Obstruction to CSF pathways; communicating and non-communicating hydrocephalus

Disorders of CSF production and CSF leakage

Ventricular shunting procedures and complications

d. Specific symptom analysis (the patient -oriented approach)

Trainee should acquire thorough ability to analyze various clinical presentation based on the above acquired ** clinical abilities as well as core principals and knowledge of basic and applied sciences.

d.1) Paroxysmal disorders

a. Distinguish:

- *seizures from syncope*
- *jitteriness and sleep myoclonus from seizures*
- *seizures and epilepsy*
- *typical from atypical febrile seizures*

b. Understand international classification of seizures

c. List common causes of seizures in:

- *neonate*
- *infants*
- *older children*

d. Describe routine evaluation and treatment indications in new onset seizures

e. Know standard dosing and side-effects of anticonvulsants

f. Define status epilepticus

- *outline initial evaluation and management*
- *list medications and doses to treat status*

g. Sleep disorders

- *define parasomnias, narcolepsy, cataplexy, and sleep apnea*

d.2) Coma and altered consciousness

Describe major disease categories that cause lethargy and coma (e.g., metabolic, infectious, traumatic, vascular, etc.)

d.3) Increased intracranial pressure

a. Describe differences between communicating and non communicating hydrocephalusand give etiologic examples of each

b. Discuss side effects of ventriculoperitoneal and ventriculoatrial shunts

c. Describe the most common brain tumors in children

d. Discuss the presentation of supratentorial and infratentorial brain tumors

e. List the most common organisms causing bacterial meningitis in neonates and children

f. List factors commonly predisposing to pyogenic brain abcess in children

g. Discuss pseudotumorcerebri

h. Discuss metabolic and toxic causes of increased ICP

i. Discuss treatment of acute and chronic increased ICP

d.4) Ataxia and other gait disorders

Discuss differential diagnosis, evaluation, and management of acute and subacute ataxia in children

d. 5) Movement disorders

a. Discuss differential diagnosis of chorea

b. List medications that can cause movement disorders

c. Define Tourette syndrome, comorbid associations, and treatment

d. 6) Headache

a. Describe the headache features (onset, location, character, duration, precipitants, associated syndromes, and family history) of migraine, increased intracranial pressure, and tension headache

b. Be familiar with the International Classification of Headache criteria

c. List indications and medications for headache treatment

d. 7) Intellectual disability

a. Discuss normal motor and cognitive development

b. Discuss consequences of tobacco, alcohol, and other commonly abused drugs(marijuana, cocaine, and heroin)

c. Discuss common manifestations of neurofibromatosis and tuberous sclerosis

d. Discuss the causes of intellectual disability

e. Discuss the multimodal approach to management of intellectual disability

d. 8) Mental and motor regression

Be familiar with conditions such as :

a. Lysosomal storage disorders

b. Peroxisomal disorders

c. Mitochondrial disorders

d. Amino acidopathies

e. Organic acidopathies

f. Disorders of carbohydrate metabolism

g. Chromosomal disorders

h. Dysmorphic syndromes

d. 9) Weakness (including peripheral, central, and weakness caused by cranial nerve dysfunction)

Be familiar with these peripheral nervous system disorders:

a. Spinal muscular atrophies

b. Muscular dystrophy and myopathy including acquired conditions

c. Myasthenia gravis

d. Acute inflammatory demyelinating polyneuropathy

e. Peripheral neuropathy (hereditary and nonhereditary)

Be familiar with the following central causes of weakness in children:

a. Stroke

b. Spinal dysraphism

c. Non compressive and compressive spinal cord lesions

d. Cerebral palsy

e. Discuss significance of neurocutaneus manifestation such as sacral dimple, hairy patch, port wine stain

Be familiar with disorders weakness due to cranial nerve dysfunction:

a. Discuss causes of facial weakness and evaluation and treatment of Bells palsy

d. 10) Disorders of sensation (including somatosensory, discriminative, position, vibration, smell, and taste; peripheral and central causes)

a. Discuss evaluation of child with hearing loss

b. Discuss evaluation of vertigo

d.11) Visual disorders

a. Discuss congenital nystagmus and spasmusnutans

b. List causes for congenital cataracts

c. Describe several causes of acquired ophthalmoplegia

d. Discuss the meaning of optic atrophy

e. Discuss causes of strabismus

d.12) Hearing disorders

d.13) Abnormalities of head growth

a. Discuss causes and evaluation of macrocephaly and microcephaly

b. Discuss craniosynostosis

d.14) Disorders unique to newborn infants

a. floppy neonate

b. neonatal seizures

c. neonatal epileptic encephalopathies

d. neonatal encephalopathies

d. 15) Learning disorders and disorders of higher cognitive function

a. List common causes of learning disabilities

b. Discuss approach to a child with:

- *delayed speech*
- *impaired attention*
- *poor academic performance*

d, 16) Speech and language disorders

a. Understand normal speech development

b. Identify common causes of delayed speech

c. Investigating a speech disorder

d. 17) Behavioral disorders

d. 18) Sleep disorders

e. Formulation of differential diagnosis**

The goal of obtaining a thorough history, performing a detailed physical examination, and localizing the lesion is establishing a differential diagnosis. This carefully-prepared list of diagnostic possibilities directs the clinician toward a rational plan for using ancillary diagnostic procedures, if necessary, to include or exclude specific disorders on the differential list.

f. Evaluation and management plan**

Treating patients with neurological disorders is the primary goal of a practicing clinical childneurologist. The trainee should learn the appropriate standard of care for neurological disorders and should constantly be vigilant for evolution in thinking and practice regarding treating these disorders. This requires continuous learning, and it requires sufficient practical experience with patients (including explaining these concepts of diagnosis and treatment to patients and to their families).

g. Performing and interpreting investigations/procedures**

In addition to being thoroughly competent in the art and science of history and physical examination in formulating an evaluation and management plan, the trainee should also be completely familiar with the indications, interpretation, techniques, contraindications, and risks of the following neurodiagnostic tests:

1) Lumbar puncture
2) EEG

3) CT
4) MRI and MRA
5) EMG and NCS
6) Visual, auditory, brainstem, and somatosensory evoked potentials
7) Cerebral and spinal angiography
8) Nerve and muscle biopsy

Understanding CNS neurotransmission; neuromuscular transmission; muscle contractile processes; neuronal excitation, inhibition, and release; cortical activation and inhibition; seizure production

E. Categories of disease and specific disorders

The trainee should be familiar with and knowledgeable about the following disease categories

a. Neurological disorders of adulthood

Common disorders occurring in adulthood such as epilepsy, headache, stroke, dementia, multiplesclerosis, movement disorders, neuromuscular disorders, etc., should make up the bulk of patients in the first 12 months of this curriculum. The trainee should also be familiar with lesscommon neurological disorders even if he or she is unlikely to see them often or at all. Such exposure can occur through case conferences, clinico-pathological correlation conferences, and by reading current literature (paper and electronic) and textbooks of neurology.

b. Neurological disorders of childhood

Common disorders including various types of seizures and epilepsy syndromes, nonepilepticparoxysmal disorders, headache, learning/developmental/cognitive disorders, disorders causing mental retardation, neuromuscular disorders, acute encephalopathies, infections of the nervoussystem, disorders of the term and preterm infant, neurotrauma, complications of systemic disease(heart, kidney, lung, liver, etc), and neurogenetic and neurometablic disorders, etc should makeup the bulk of patients during this portion of the

curriculum. More common disorders should beproportionately represented, but attempts should be made to familiarize the trainee with lesscommon disorders to prepare him or her for the consultative role as a child neurology specialist. Case conferences, clinico-pathological correlations, and reading should be a major adjunct toseeing patients and should expand the trainee's knowledge of both common and less familiar disorders. The following list of specific disorders is in reality a list of categories of specific disorders. No attempt will be made to name specific disorders, as such a list would beexhaustive and would invariably omit disorders as important as the ones listed. The trainee, however, it expected to be exposed to an exhaustive number of different specific disorders representing the broad spectrum of conditions seen in a child neurology practice.

Specific categories of disorders

Disorders of brain and spinal cord development

Disorders unique to infants (neonatal neurology)

Infections involving the nervous system

Inflammatory disorders (eg; *autoimmune*, paraneoplastic) affecting the nervous system

Cerebrovascular disorders

Cerebral palsy

Syndromes associated with mental retardation

Development delay and deviation

Chromosomal disorders affecting the nervous system

Metabolic and neurodegenerative diseases

Nutritional l and toxin-associated disorders of the nervous system

Neurocutaneous syndromes

Neoplasms of the nervous system

Neuroendocrine disorders

Seizures, epilepsy, and epilepsy syndromes

Nonepileptic paroxysmal disorders

Sleep disorders

Movement disorders

Headache

Neuromuscular diseases

Disorders of the autonomic nervous system

Disorders of learning and behavior

Spinal cord disorders

Disorders of vision and hearing

Neurological complications of systemic disease

Brain injury, brain death, coma, and the persistent vegetative state

Annex II

POSTGRADUATE INSTITUTE OF MEDICINE

UNIVERSITY OF COLOMBO, SRI LANKA

BOARD OF STUDY IN PAEDIATRICS

MD PAEDIATRIC NEUROLOGY

PROGRESS REPORT

Important Information

- For each period of training all nominated supervisors are required to either complete an individual report or co-sign a report
- Training will not be certified without the final supervisor's report

TRAINEE'S DETAILS AND TRAINING POSITION			
Full name of the trainee			
Report period from		to	
Training position			
TRAINER'S DETAILS			
Full name of trainer			
Qualifications			

ASSESSMENT OF THE CURRENT PERIOD OF TRAINING

Please rate the trainee's performance for each topic area by placing a rating of 1-5 (or N/A) in the box next to each topic area

Rating Scale 1 - Falls far short of expected standards

2 - Falls short of expected standards

3 - Consistent with level of training

4 - Better than expected standards

5 - Exceptional performance

N/A Not Applicable for this training period

Medical Knowledge Demonstrates up-to-date knowledge required to manage patients	
Application of Medical Knowledge Shows ability to use the knowledge and other derived evidence based information	
Procedural Skills Demonstrates ability to perform practical/ technical procedures	
Interpersonal/ Communication Skills Demonstrates ability to communicate with patients and their families	
Clinical Judgment Demonstrates ability to integrate cognitive and clinical skills, and consider alternatives in making diagnostic and therapeutic decisions	
Responsibility Accepts responsibility for own actions and understands the limitations of own knowledge and experience	
Punctuality	
Problem Solving Skills Critically assesses information, identifies major issues, makes timely decisions and acts upon them	
Humanistic Qualities Demonstrates integrity and compassion in patient care	
Respect Shows personal commitment to honouring the choices and rights of other persons	
Moral and Ethical Behaviour Exhibits high standards of moral and ethical behavior towards patients and families	

Professional Attitudes and Behaviour Shows honesty at all times in their work, put patient welfare ahead of personal consideration	
Patient Management Shows wisdom in selecting treatment, adopt management to different circumstances	
Psychological Development Demonstrates ability to recognize and/ or respond to psychological aspects of illness	
Medical Care Effectively manages patients through integration of skills resulting in comprehensive high quality care	
Research Methodology Understands scientific methodology; participate in research studies by formulating and testing hypothesis and analyzing the results	
Quality Assurance Demonstrates ability to initiate and evaluate Quality Assurance programmes	
Record Keeping Maintains complete and orderly records and up-to-date progress notes	
Discharge/ Planning Summaries Ensues that all problems are explained prior to discharge from hospital; prepare concise and prompt discharge summaries	
Reports Complete succinct and accurate reports without delay; communicates with referring practitioner for continuing care	
Relationships with Medical Staff Maintains the respect of his/ her colleagues	
Relationships with Health Professionals Demonstrates ability to work well and efficiently in the health care team; values the experience of others	
Relationships with Clerical Staff Relates easily to members of staff; maintains team spirit and encourages cooperation	
Organization Skills Demonstrates ability to plan, coordinate and complete administrative tasks associated with	

medical care	
Self-Assessment Accepts the limits of own competence and functions within own capabilities; seeks advice and assistance when appropriate; accepts criticism	
Continuing Education Shows a resourceful attitude towards continuing education to enhance quality of care	

Please comment on any **strengths and weaknesses** that the trainee displayed with regard to the above areas

Strengths:-

Please comment on any **weaknesses** that the trainee displayed with regard to the above areas

Weaknesses:-

COMPONENTS OF TRAINING IN GENERAL PAEDIATRICS

SUMMARY OF THE TRAINING COMPONANT

A.	**Are you satisfied with the overall performance of the trainee during the period covered by this report?**	
	If no, are there any specific factors which may have affected this trainee's performance or do you have any reservations about performance?	
B.	**Did the trainee take any leave during the period covered by this report?**	
	If yes, please indicate the periods and types of leave and whether prior approval was obtained.	
	TRAINER'S COMMENTS	

Trainee's signature _____

Date _____

Trainer's Signature _____

Date _____

Annex III

POSTGRADUATE INSTITUTE OF MEDICINE

UNIVERSITY OF COLOMBO, SRI LANKA

IN SERVICE TRAINING ASSESSMENT

MD PAEDIATRIC NEUROLOGY

Case Based Discussion (CBD)

Trainee's name											
Date of assessment(dd/mm/yyyy)											
Training Centre											
Year of training:	**1**	**2**	**3**	**4**							
Clinical setting	OPD/Clinic		In-patient		Acute Admission		Neonates				
Clinical problem	Respiratory		CVS	GI	CNSNeonates		Development		Emergency		
Focus of Clinical Encounter	History		Examination		Diagnosis		Management		Discussion		
Other (Please specify)											

Please insert a brief clinical summary of the case below (e.g. 3 year old with prolonged febrile seizure, developmental delay and acute respiratory distress):

Please grade the below areas using the given scale:

Grading	Unsafe	Below Expectations	Borderline	Meets expectations	Above Expectations	Well aboveexpectations	Unable to comment
	F	**E**	**D**	**C**	**B**	**A**	
History							
Clinical Assessment							
Problem identification							
Investigation							
Management							

**Overall performance	Unsafe	Below Expectation	Borderline	Meets Expectation	Above Expectation	Well above Expectation

**** Mandatory : Please grade the overall performance of the trainee on CBD**

Areas of strengths/weaknesses	Suggestions for improvement/further development
Action agreed upon :-	

Assessor's position : Consultant ☐ Senior Registrar ☐

Assessor's signature : _____ Assessor's Name : _____

Trainee's comments :

Trainee's signature : _____

POSTGRADUATE INSTITUTE OF MEDICINE

UNIVERSITY OF COLOMBO, SRI LANKA

IN SERVICE TRAINING ASSESSMENT

MD PAEDIATRIC NEUROLOGY

MINI CLINICAL EVALUATION (MCE)

Trainee's name :										
Date of assessment(dd/mm/yyyy) :										
Training Centre :										
Year of training: :	**1**	**2**	**3**	**4**						
Clinical setting :	OPD/Clinic		In-patient		Acute Admission		Neonates			
Clinical problem :	Respiratory		CVS	GI	CNS Neonates		Development		Emergency	
Focus of Clinical Encounter :	History		Examination		Diagnosis		Management		Discussion	
Other (Please specify)										

Please insert a brief clinical summary of the case below (e.g. 3 year old with prolonged febrile seizure, developmental delay and acute respiratory distress):

Please grade the below areas using the given scale:

Grading	Unsafe	Below Expectations	Borderline	Meets expectations	Above Expectations	aboveexpectations	Unable to comment
	F	**E**	**D**	**C**	**B**	**A**	
History Taking							
Communication Skills							
Examination							
Clinical Judgment							
Initial Management							

**Overall performance	Unsafe	Below Expectation	Borderline	Meets Expectation	Above Expectation	Well above Expectation

**** Mandatory : Please grade the overall performance of the trainee on MCE**

Areas of strength	Suggestion for development
Action agreed upon :-	

Assessor's position : Consultant ☐ Senior Registrar ☐

Assessor's signature : _____ Assessor's Name : _____

Trainee's comments :

Trainee's signature : _____

POSTGRADUATE INSTITUTE OF MEDICINE

UNIVERSITY OF COLOMBO, SRI LANKA

IN SERVICE TRAINING ASSESSMENT

MD PAEDIATRIC NEUROLOGY

MULTI SOURCE FEEDBACK (MSF)

Trainee's name :				
Date of assessment(dd/mm/yyyy) :				
Training Centre :				
Year of training: :	**1**	**2**	**3**	**4**

Length of working relationship (in months) :

You will be expected to provide a feedback on the work performance of the trainee with anonymous feedback of at least 2 members of the hospital staff (seniors, peers, juniors, nurses and other health professionals)

Grading	Unsafe	Below Expectations	Borderline	Meets expectations	Above Expectations	Wellabove expectations	Unable to comment
	F	**E**	**D**	**C**	**B**	**A**	
Ability to diagnose patient problems							
Ability to formulate appropriate management plans							
Ability to manage complex patients							
Awareness of his own limitations							
Responds to psychosocial aspects of patients							

Appropriate utilization of resources e.g. ordering investigations							
Ability to coordinate patient care							
Technical skills (appropriate to current practice)							
Ability to apply up-to-date / evidence based medicine							
Ability to manage time effectively / prioritize							
Ability to deal with stress							
Commitment to learning Willingness and effectiveness when teaching/training colleagues							
Communication with carers and/or family							
Ability to recognize and value the contribution of others							
Accessibility / reliability							
Leadership skills							
Punctuality							

**Overall performance	Unsafe	Below Expectation	Borderline	Meets Expectation	Above Expectation	Well above Expectation

**** Mandatory for the trainer to complete**

Trainer's comments:	Suggestion for development
Action agreed upon	

Assessor's position : Consultant ☐ Senior Registrar ☐

Assessor's signature : _____ Assessor's Name : _____

Trainee's comments :

Trainee's signature : _____

POSTGRADUATE INSTITUTE OF MEDICINE

UNIVERSITY OF COLOMBO, SRI LANKA

IN SERVICE TRAINING ASSESSMENT

MD PAEDIATRIC NEUROLOGY

DIRECTLY OBSERVED PROCEDURAL SKILLS (DOPS)

Trainee's name	:					
Date of assessment(dd/mm/yyyy)	:					
Training Centre	:					
Year of training:	:	**1**	**2**	**3**	**4**	
Clinical setting	:	In-patient	ETU/OPD	Intensive Care unit	Neurophysiology	
Other (Please specify)						

Please insert a brief summary of the procedure observed

Please grade the below areas using the given scale:

	Unsafe	Below Expectations	Borderline	Meets Expectations	Above Expectations	Well above Expectations	Unable to comment
	F	**E**	**D**	**C**	**B**	**A**	
Demonstrates understanding of indications relevant anatomy, technique of procedure							
Obtains informed consent							
Demonstrate appropriate preparation pre-procedure							
Appropriate anaesthesia/ sedation							
Technical ability							
Aseptic technique							
Seeks help where appropriate							
Post procedure management							
Communication skills							
Consideration of patient/ professionalism							
Overall ability to perform procedure							

**Overall performance	Unsafe	Below Expectation	Borderline	Meets Expectation	Above Expectation	Well above Expectation

**** Mandatory for the trainer to complete**

Trainer's comments:	Suggestion for development
Action agreed upon	

Assessor's position : Consultant ☐ Senior Registrar ☐

Assessor's signature : _____ Assessor's Name : _____

Trainee's comments :

Trainee's signature : _____

POSTGRADUATE INSTITUTE OF MEDICINE

UNIVERSITY OF COLOMBO, SRI LANKA

IN SERVICE TRAINING ASSESSMENT

MD PAEDIATRIC NEUROLOGY

ASSESSMENT OF TEACHING SKILLS

Trainee's name	:				
Date of assessment(dd/mm/yyyy)	:				
Training Centre	:				
Year of training:	:	**1**	**2**	**3**	**4**
Clinical setting	:	In-patient	ETU/OPD	Intensive Care unit	
Other (Please specify)					

Please insert a brief summary of the teaching skill assessed

Please grade the below areas using the given scale:

	Unsafe	Below Expectations	Borderline	Meets expectations	Above Expectations	Well above expectations	Unable to comment
	F	**E**	**D**	**C**	**B**	**A**	
Clarity and Organization (all sessions)							
Presents material in a logical sequence							
Summarizes major points of lesson							
Method of communication medium							
Demonstration of physical signs							
Effective communication							
Projects voice clearly, with intonation; easily heard							
Demonstrates and stimulates enthusiasm							
Varied explanations for complex and difficult scenarios							
material, using examples to clarify points							
Defines unfamiliar terms, concepts and principles							
Listens to students' questions and comments							

Interaction with students							
Information up-to-date							
Demonstrates advanced preparation for teaching sessions							

****Overall performance**	**Below Expectation**	**Borderline**	**Meets Expectation**	**Above Expectation**	**Well above Expectation**

**** Mandatory for the trainer to complete**

Areas of strength	Suggestion for development
Action agreed upon	

Assessor's position : Consultant ☐ Senior Registrar ☐

Assessor's signature : _____ Assessor's Name : _____

Trainee's comments :

Trainee's signature : _____

POSTGRADUATE INSTITUTE OF MEDICINE

UNIVERSITY OF COLOMBO, SRI LANKA

IN SERVICE TRAINING ASSESSMENT

MD PAEDIATRIC NEUROLOGY

COMMUNICATION SKILLS

Trainee's name :					
Date of assessment(dd/mm/yyyy) :					
Training Centre :					
Year of training: :	**1**	**2**	**3**	**4**	
Clinical setting :	In-patient	ETU/OPD	Neonatal unit	Intensive Care unit	
Other (Please specify)					

Please insert a brief summary of the communication scenario assessed

Please grade the below areas using the given scale:

	Unsafe	Below Expectations	Borderline	Meets Expectations	Above Expectations	Well above Expectations	Unable to comment
	F	E	D	C	B	A	
Conduct of Interview							
Introduction, clarifies role							
Rapport							
Empathy and respect							
Appropriate explanation and negotiation							
Clear explanation, no jargon							
Assessment prior knowledge of patient							
Appropriate questioning style							
Explores and responds to							
concerns and feelings							
Summarises and checks understanding							
Offer support and plan the management							
Time for questions							
Accuracy of information given							
Appropriate selection of information							
Accuracy of information							

****Overall performance**	**Below Expectation**	**Borderline**	**Meets Expectation**	**Above Expectation**	**Well above Expectation**

**** Mandatory for the trainer to complete**

Areas of strength	Suggestion for development
Action agreed upon	

Assessor's position : Consultant ☐ Senior Registrar ☐

Assessor's signature : _____ Assessor's Name : _____

Trainee's comments :

Trainee's signature : _____

POSTGRADUATE INSTITUTE OF MEDICINE

UNIVERSITY OF COLOMBO, SRI LANKA

IN SERVICE TRAINING ASSESSMENT

MD PAEDIATRIC NEUROLOGY

Discharge Summaries, Referrals & Letters (DSRL)

Trainee's name	:				
Date of assessment(dd/mm/yyyy)	:				
Training Centre	:				
Year of training:	:	**1**	**2**	**3**	**4**
Clinical setting	:	In-patient	ETU/OPD	Neonatal unit	Intensive Care unit
Other (Please specify)					

Please insert a brief summary of the scenario assessed

Please grade the below areas using the given scale:

	Unsafe	Below Expectations	Borderline	Meets Expectations	Above Expectations	Well above Expectations	Unable to comment
	F	**E**	**D**	**C**	**B**	**A**	
Problem List							
Is there a medical problem list?							
Are any obvious and significant problems omitted?							
Are any irrelevant problems listed?							
History							
Is there a record of the family's current concerns being sought of clarified?							
Is the document history appropriate to the problems and questions?							
Examination							
Is the documented examination appropriate to the problems and questions?							
Overall assessment							
Is the current state of health or progress clearly outlined?							
Are the family's problems or questions addressed?							
Is/are the referring doctor's questions addressed?							
Is a clear plan of investigation or non-investigation recorded?							
Are the reasons for the above plan adequately justified?							

Are all the known treatments, or absence of treatment, recorded clearly?							
Are all the doses clearly stated in formal units?							
Is adequate justification given for any changes to treatment?							
Is there an adequate record of information shared with the family?							
Follow up							
Is it clear whether or not hospital follow-up is planned?							
Is the purpose of follow up adequately justified?							
Clarity							
Is there much unnecessary information?							
Does the structure of the letter flow logically?							
Are there any sentences you do not understand?							

****Overall performance**	**Below Expectation**	**Borderline**	**Meets Expectation**	**Above Expectation**	**Well above Expectation**

**** Mandatory for the trainer to complete**

Areas of strength	Suggestion for development
Agreed action	

Assessor's position : Consultant ☐ Senior Registrar ☐

Assessor's signature : _____ Assessor's Name : _____

Trainee's comments :

Trainee's signature : _____

Annex IV

Training component	Duration	Name and Signature of trainer
Adult neurology	6 months	
Paediatric Neurology	12 months	
Neurophysiology	6 weeks	
Intensive Care Unit	6 weeks	
Radiology	4 weeks	
Rehabilitation	4 weeks	
Neurosurgery	2 weeks	
Psychiatry	2 weeks	
ENT*	2 weeks	
Ophthalmology*	2 weeks	

Annex V

Portfolio

Content of the portfolio should encompass all of learning outcomes mentioned below and contains evidence of achievement of these outcomes by the trainee.

- Subject expertise
- Teaching
- Research and Audit
- Ethics and medico legal issues
- Information technology
- Lifelong learning
- Reflective practice

Subject expertise

- Progress reports from supervisors on a prescribed format
- ISTA forms
- Log of procedures carried out
- This section must include evidence that the trainee has acquired the essential knowledge, skills and competencies related to the subspecialty

Teaching

- Undergraduates
- Postgraduates
- Ancillary health staff

Research and audit relevant to specialty or subspecialty

- Research papers published
- Abstracts of presentations

Ethics and Medico – legal issues

- Completed Professionalism Observation Forms(from integrated learning component of Professionalism Strand)
- Completed PTR forms

Information technology

- Participation in training programmes /workshops
- Evidence of searching for information and application of findings in practice

Life- long learning

- Participation in conferences and meetings

Reflective practice

- The fundamental basis of Portfolio maintenance is Reflective practice which is an important tool in postgraduate training. Reflective practice consists of:-
  - focused self-assessment
  - reflecting on experience
  - reflecting on strengths, weaknesses and areas for development
  - design of own strategies that leads to improvement in practice

The trainee is expected to continue updating the portfolio during the local and foreign training.

Prior to the Pre-Board Certification Assessment (PBCA), a panel of two examiners appointed by the BOS will assess the completed portfolio. A satisfactory Portfolio Assessment Report is a mandatory requirement for the PBCA.

***For further details refer General Paediatrics Prospectus*.**

Portfolio Assessment Report

Subject expertise, teaching, research and Audit, ethics and medico legal issues, information technology and lifelong learning will be assessed according to the rating scale mentioned below.

	Marks/10
Fail	3
Borderline	4
Pass	5
Good pass	6
Excellent pass	7+

Reflective practice will be assessed according to the following rating scale given below.

		Marks/10
Fail	Has not completed Reflective cycle	3
Borderline	Has only described the learning experience	4
Pass	Analysed the reasons for the experience & the reasons for outcome	5
Good Pass	Evaluated how the outcome could have been different if a different course of action was taken	6
Excellent Pass	Provided high quality evidence for implementing changes	7+