

“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”

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POSTGRADUATE INSTITUTE OF MEDICINE

UNIVERSITY OF COLOMBO

Prospectus for

The Postgraduate Course

Conducted by

The Board of Study in Paediatrics

For

Board Certification in Neonatal and Perinatal Medicine

(To be effective from the year 2014)

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1. Background and Justification/Introduction

Neonatal Medicine is a technical, highly specialised and rapidly evolving area of paediatric medicine. Neonatal and perinatal problems account for a major part of childhood morbidity and mortality. In Sri Lanka, neonatal mortality accounts for over 75% of infant mortality at present. Hence it is imperative to recognize the importance of neonatology as an area of subspecialisation.

The Board of Study in Paediatrics (BOSP) implemented specialisation in several sub-specialities in 2004 with the intention of providing specialized and more focused attention to certain needy areas in Paediatrics. These were Neonatal/Perinatal Medicine, Paediatric Intensive Care, Paediatric Cardiology, Paediatric Neurology and Paediatric Nephrology. The Ministry of Health, in total agreement with the necessity to improve neonatal & perinatal care in order to reach better standards of infant and child health, opened up cadre positions for Specialist Neonatologists in all teaching hospitals, all District Hospitals and many Base Hospitals. Although Sri Lanka has commendable standards with regard to perinatal, neonatal and infant health statistics, it is clear that we, as a country can further improve with more focus towards improving maternal and newborn care.

Up to January 2014, sixteen post graduate trainees were recruited into the Sub-speciality Training Programme in Neonatal and Perinatal Medicine. Seven of them have successfully completed training and have already been Board Certified as Specialists in Neonatal Medicine.

This document outlines the structure, curriculum, training schedule and the prerequisites leading to Board certification as a specialist in Neonatology.

Overview of the speciality

The BOSP recognises that the practice of modern neonatal/perinatal medicine is different from the standard practice of paediatrics. The speciality encompasses management of the newborn infant at all levels of care including the well newborn as well as those requiring specialised and intensive care, together with counselling parents of the foetus at risk, infants with problems and end of life situations.

This curriculum details the specific outcomes to be achieved by trainees on completion of the Training Programme in Neonatal/Perinatal Medicine. This subspecialty-specific training builds on and further develops the knowledge and skills acquired during the three years of post-graduate paediatric & neonatal training programme during Stages I, II and III of the MD (Paediatrics) Training Programme.

The learning objectives specified within this curriculum are defined at the level of a person who, upon graduation from this training programme, would be expected to accept total responsibility for the patient's welfare and clinical care. The learning objectives and related knowledge, skills, attitudes and behaviours, the range of training experiences, teaching, learning and assessment methodologies have been defined in consistence with this expectation.

The specific content material detailed within the curriculum section of the document provides a guide for good practices in teaching, learning and assessment within the context of daily workplace activities and clinical practice. As such, it will need to be implemented within the

reality of current workplace and workforce scenarios and the needs of health services provisions as well as exigencies of service.

Supervisors and trainees will also need to be cognisant of all applicable national and state health policies, issues and guidelines, and incorporate the practice of these into relevant aspects of teaching, learning, assessment within the context of their professional and daily clinical practice.

2. Eligibility for entry into the training programme

Applicants should have passed the MD Paediatric Examination. The candidates 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.

3. Selection process for training programme

Within one month of successful completion of MD Paediatrics examination, the candidates will be offered the training positions in Neonatal and Perinatal Medicine by the BOSP, based on the recommendations made by the Ministry of Health. The candidates on the basis of the order of merit of the MD Paediatrics examination will be able to select Neonatal and Perinatal Medicine Speciality Training Positions, if and when they are made available.

4. Number to be selected for training

The number of candidates will be decided by the Ministry of Health each year.

Refer General Paediatric prospectus for selection criteria for subspecialties.

Once the selection is made, the candidate would come under the general purview of the Special Committee of the BOSP that deals with Neonatal Medicine.

Each candidate would be allocated to a mentor appointed by the BOSP. He/she would guide the trainee throughout the training programme.

5. Outcomes & Learning objectives

5.1 Outcome

Graduates from this training programme will be equipped to function effectively within the current and emerging professional, medical and societal contexts. At the completion of the Sub-speciality Training Programme, as defined by this curriculum, it is expected that a Senior Registrar in training would have developed the clinical skills and have acquired the theoretical knowledge for competent neonatal/perinatal medical practice.

5.2 Learning objectives

It is expected that he/she will be able to:-

- participate in the multidisciplinary assessment and management of the at-risk foetus
- lead and direct the clinical management of all aspects of preterm and term newborn infants
- understand the regional organisational aspects of perinatal care and the principles of neonatal transport
- understand the psychological, behavioural and ethical issues relevant to the clinical care of newborn infants
- Develop skills in
 - Counselling parents in an emotionally and culturally appropriate fashion
 - prenatal counselling in liaison with the obstetric team on high risk pregnancies
 - genetic counselling for newborns with inherited disorders
 - Managing infants and families requiring palliative care
 - Requesting an autopsy
 - Supporting and debriefing health-care team
 - Follow up of family.
- appreciate the importance of continuity of clinical care, including discharge planning, follow-up and referral of infants for ongoing paediatric care
- be cognisant of the importance of long term follow-up
- understand the complex psychological, behavioural, ethical and organisational aspects of working in a large multidisciplinary team
- be conversant with research methodology, critical appraisal of the literature and the practice of evidence based medicine.
- have a working knowledge of standard equipment use and in the SCBU/NICU in order to be able to supervise and ensure proper use and maintenance of the equipment by nursing and other support staff
- Be able to function as the Team Leader and guide junior medical, nursing and other support staff in the SCBU/NICU in caring for sick neonates in the unit.

A Board certified Neonatologist should be able to head a “Level 3” Neonatology Unit with confidence as well as manage a neonatal unit with limited facilities in the most appropriate way, depending on the service requirements.

6. Training content and curriculum

6.1 The trainee is expected to achieve full competency in the following key areas in neonatology

6.1.1 Understand the Neonatologist's role in reducing morbidity in high risk pregnancies and complications of childbirth.

- i. Be able to describe general principles regarding:
 - Basic vital statistics that is applicable to newborns (neonatal, perinatal mortality, etc.)
 - Tests commonly used by Obstetricians to measure foetal well-being.
 - Prenatal services available in Sri Lanka (i.e. antenatal diagnostic tests, anomaly scans etc.)
 - Prenatal visits with Neonatologist for counselling and planning the delivery
 - Neonatal Transport Systems available in Sri Lanka
 - Effective intervention programmes for teenage mothers and other high risk mothers
- ii. Be able to describe the neonatologist's role in assessment, management and recognizing the potential adverse outcomes of the foetus/neonate in each of the following prenatal and perinatal complications

List of complications:

- Maternal infections/exposure to infections during pregnancy (i.e. varicella)
 - Foetal exposure to harmful substances (Narcotic drugs, medications, environmental toxins)
 - Maternal insulin-dependent diabetes and pregnancy-induced glucose intolerance
 - Premature labour, premature rupture of membranes
 - Complications of anaesthesia and common delivery practices (LSCS, vacuum, forceps, epidural, induction of labour)
 - Foetal distress during delivery
 - Postpartum maternal fever/infection
 - Complications resulting from the mother suffering from hepatitis B, HIV infection
 - Multiple gestations
 - Placental abnormalities
 - Pre-eclampsia, eclampsia
 - Chorioamnionitis
 - Polyhydramnios
 - Oligohydramnios
- iii. Able to discuss the paediatrician's role in reducing foetal and neonatal morbidity/mortality in his/her own area/hospital

6.1.2 Understand how to resuscitate and stabilize a critically ill neonate.

- i. Describe the steps in resuscitation and stabilization, including equipment needed.
- ii. Demonstrate efficient and effective resuscitation in a mock setting and under stress of actual setting.
- iii. Formulate a differential diagnosis for serious symptoms presenting during transfer to the NICU or in the NICU immediately after resuscitation.
- iv. Acquire competence in performing the following skills :-

Venepuncture
Administration of IV/IM/SC/ID injections
Venous and arterial cannulation
Lumbar puncture
Insertion of nasogastric tubes and NG feeding
Insertion of umbilical artery and venous lines
Insertion of long lines & central lines
Exchange blood transfusion

Intubation and administration of surfactant
Pleural and peritoneal aspirations
Insertion of chest drains
Insertion of urinary catheters
Ultrasound scanning of brain
Setting up the ventilator
Total body and brain cooling

6.1.3 Understand how to evaluate and manage common signs and symptoms of disease in high- risk newborns.

For each of the signs and symptoms below:

- Perform an appropriate assessment
- Formulate a differential diagnosis with suitable prioritization
- Describe indications for admission or referral to different levels of NICU or SCBU.
- Describe stabilization procedures to prepare for transfer
- Formulate and carry out a plan for continuing assessment and management

List of Signs and Symptoms

General: Intrauterine growth failure, large-for-gestational-age, hypothermia, hyperthermia, prematurity, feeding problems, poor postnatal weight gain, lethargy/irritability/jitteriness, history of maternal infection, dehydration.

Cardiorespiratory: Respiratory distress, cyanosis, apnoea, bradycardia, heart murmur, hypotension, hypertension, hypovolemia, poor pulses, shock.

Dermatologic: Common skin rashes/conditions, birthmarks, hyper and hypopigmented lesions, discharge and/or inflammation of the umbilicus, proper skin care for premature infants, vesicles.

GI/Surgical: Feeding intolerance, vomiting, bloody stools, distended abdomen, hepatosplenomegaly, abdominal mass, failure to pass stools, diarrhoea.

Genetic/Metabolic: Metabolic acidosis, hypoglycaemia, hypercalcaemia, hypocalcaemia, hypokalemia, hyperkalemia, apparent congenital defects or dysmorphic syndromes.

Haematologic: Jaundice in a premature, term or seriously ill neonate, petechiae, anaemia, polycythemia, abnormal bleeding, thrombocytopenia, neutropenia.

Musculoskeletal: Birth trauma related fractures and soft tissue injuries, dislocations, birth defects and deformities.

Neurologic: Hypotonia, hypertonia, seizures, lethargy, early signs of neurologic impairment, microcephaly, macrocephaly, spina bifida, birth trauma related nerve damage.

Parental Stress/Dysfunction: Poor attachment, postpartum depression, anxiety disorders, teen parent, substance abuse, child abuse and neglect.

Renal/Urologic: Oedema, decreased urine output, abnormal genitalia, renal mass, hematuria, urinary retention, inguinal hernia.

Ophthalmologic: abnormal red reflex, eye anomalies

6.1.4 Understand how to manage common diagnoses of neonates in NICU/ SCBU.

For each of the following common diagnoses in the list below, be able to:-

- Describe the patho-physiologic basis of the disease.
- Describe the initial assessment plans.
- Discuss key principles of the NICU management plan.

List of Common Diagnoses in this Setting (NICU)

Pulmonary disorders: Hyaline membrane disease, transient tachypnoea of the newborn, meconium aspiration, amniotic fluid or blood aspiration, persistent pulmonary hypertension, pneumonia, pneumothorax, broncho-pulmonary dysplasia, atelectasis.

Cardiac conditions: Congenital heart disease (cyanotic and acyanotic, obstructive lesions, single ventricle), patent ductus arteriosus, congestive heart failure, SVT, complete heart block.

Genetic, endocrine disorders: Infant of diabetic mother, common chromosomal anomalies, congenital adrenal hyperplasia, hypo and hyperthyroidism.

GI/nutrition: Feeding plans and nutritional management of high risk neonates or those with special needs, breast feeding support for mothers and infants with special needs, hepatitis, gastrointestinal reflux, meconium plug, malrotation, Hirschsprungs, necrotizing enterocolitis, short gut syndrome.

Haematologic conditions: Indications for phototherapy, anaemia, polycythemia, transfusion of blood products, exchange transfusions in the premature/term or ill neonate, erythroblastosisfetalis/hydropsfetalis, coagulopathy, haemophilia, Vitamin K prophylaxis/deficiency.

Infectious diseases: Intrauterine viral infections, Group B Streptococcal infections, neonatal sepsis and meningitis, herpes simplex; infant of HIV infected mothers, neonatal hepatitis, syphilis; nosocomial infections in the NICU, central line infections, immunization of the premature neonate, isolation procedures for contagious diseases in mother/infant.

Neurologic disorders: Hypoxic-ischemic encephalopathy, intra-ventricular haemorrhage, hearing loss in high risk newborns, drug withdrawal, seizures, hydrocephalus, spina bifida, CNS anomalies.

Surgery: Assess and participate in management under supervision of or collaboration with paediatric surgeons. Necrotizing enterocolitis, short gut syndrome, intestinal perforation, intestinal obstruction, diaphragmatic hernia, malrotation, oesophageal atresia and tracheoesophageal fistula, intestinal atresia, meconium ileus, meconium plug syndrome, gastroschisis, omphalocele, imperforate anus, pre-op and post-op care.

Eye disorders: retinopathy of prematurity, cataracts and eye anomalies

6.1.5 Understand how to use and interpret laboratory and imaging studies pertinent to the NICU

- i. Order and interpret laboratory and imaging studies appropriate for NICU patients.
- ii. Explain indications, limitations, and gestational-age norms for the following which may have specific application to neonatal care:
 - Serologic and other studies for trans-placental infections
 - Direct and indirect Coomb's test
 - Neonatal screening
 - Cranial ultrasound
 - Abdominal x-rays for placement of umbilical catheter, bowel gas pattern, evidence of NEC
 - Chest x-rays for endotracheal tube placement, heart size and vascularity, deep line placement
 - Imaging studies such MRI and CT scan

6.1.6 Understand the application of the physiologic monitoring and special technology applied to the care of the foetus and newborn

To be able to discuss the indications for, limitations of, and demonstrate proper use/instruction for use, for each of the following which are commonly used by Paediatricians

- Monitoring of temperature, pulse, respiration, blood pressure
- Phototherapy
- Pulse oximetry
- Umbilical arterial and venous lines
- Catheterization
- Endotracheal intubation
- Thoracocentesis
- Chest tube placement
- Electric and manual breast pumps
- Total body and brain/head cooling

Able to describe key indications, limitations, normal and frequently encountered abnormal findings, and common complications for the foetus/infant from each of the following techniques and procedures used by obstetricians and neonatologists :-

- Foetal multipara monitors
- Foetal ultrasound for size and anatomy
- Scalp and cord blood sampling
- Surfactant therapy
- Extra Corporeal Membrane Oxygenation (ECMO)
- Nitric oxide therapy
- Amniocentesis
- Intrauterine transfusions
- Percutaneous-umbilical-cord-blood-sampling (PUBS)
- Chorionic villus sampling
- Exchange transfusion
- Total parenteral nutrition

6.1.7 Understand the pharmacological and non-pharmacological management of pain in neonates

- Learn to assess and manage differing pain severities associated with the procedures and communicate with parents regarding pain and its management.

6.1.8 Understand the importance of “End of Life Care” management and secure knowledge regarding

- Long term outcome of infants of borderline viability and infants with major medical problems
- Ethical issues with regard to: borderline viability (awareness of attitudes), congenital malformations, discontinuation of life support measures & non initiation of resuscitation

- Family (including sibling) emotional and behavioural issues
- Medico-legal issues
- Palliative care
- Role and importance of autopsy
- Role of cognitive, emotional, cultural and spiritual factors in end-of-life decisions
- Recognize the value of a multi-disciplinary approach to the family of a dying newborn.

6.1.9 Understand the necessity for Long-term Health Care and Follow-up. Gain knowledge about

- issues relating to: chronic respiratory disease, hearing disability, long-term neuro-disability, severe ROP and visual impairment, short gut syndrome, malnutrition/poor growth and chronic feeding issues
- Components of multidisciplinary team, including local medical officer and community services
- Impact of chronic health issues on the patient and family
- Impact of poly-pharmacy in chronic illnesses.

Develop the necessary skills to

- Perform a neuro-developmental assessments
- Assess/investigate poor growth and nutrition
- Assess/investigate for hearing and visual impairment
- Communicate, refer to and work with paramedical staff and multidisciplinary teams and community services
- Counsel parents/family about the impact of long-term illness on the child and family
- Coordinate follow-up of baby and family with multidisciplinary team
- Demonstrate a collaborative approach within a multidisciplinary team.

6.1.10 Understand the medico-legal, social, and family issues related to neonates/infant-at-risk and develop the skills to

- Identify and manage families at high psychosocial risk, including taking a full drug and alcohol history
- Liaise with Multi-disciplinary Teams and Support Services
- Diagnose and manage neonatal abstinence syndrome and address child protection issues
- Counsel parents/family
- Co-ordinate follow-up of high risk infants and their families, including liaison with relevant community services
- Demonstrate a collaborative approach within a multidisciplinary team
- Identify strategies for the safe discharge and community support of families at high psychosocial risk.

6.1.11 Understand how to function effectively as part of an Inter-disciplinary Team and to be able to

- Communicate and work effectively with all members of the healthcare team (doctors, nurses, nutritionist, pharmacists, physiotherapist and ancillary staff.
- Demonstrate sensitivity and skills in dealing with death and dying in the NICU setting.
- Consistently listen carefully to concerns of families and provide appropriate information and support.
- Provide counselling and support for breast feeding of premature and critically ill infants, including maintenance of mother's milk supply when the infant cannot suckle.
- Provide responsible communication regarding the follow up plan with the Paediatrician/Medical Officer of Health from the local area at the time of discharge.
- Maintain daily timed notes, with updates as necessary, clearly documenting the patient's progress and details of the on-going evaluation and plan.
- Ensure discharge summary is timely and concise, with clear documentation of discharge plans and follow up appointments.
- Be able to liaise with Obstetricians in the delivery of feto-maternal health care, and effectively and empathically counsel pregnant mothers in the possible outcomes of high risk pregnancies

6.2 workshops/ courses

The trainee should have successfully completed a Lactation Management (5 Day) Training course and a Neonatal Advanced Life Support Course before completion of the local training.

7. Structure of the Training Programme

7.1 Duration of training

The selected trainee/s will enter a minimum mandatory duration of 36 months of supervised and prospectively approved training in Neonatal/Perinatal Medicine (Stage IV training).

Total period of Senior Registrar Training (36 months)

This includes	Local Training	(18 months)
	Overseas Training	(18 months)

7.2 Clinical Training Programme (Local Training)

- At “Level 3” Neonatal Units* in two separate Teaching Hospitals approved for Senior Registrar Training by the BOSP - 06 months in each unit - 12 months
- Paediatric Intensive Care Training at a Tertiary Paediatric Intensive Care Unit approved by the BOSP - 2 months
- Surgical Intensive Care Unit Training at LRH - 1 month
- Neonatal Echo-cardiography / Cardiac Training at LRH - 1 month
- Neonatal Ultra Sound Scan Training at LRH - 1 month
- Neonatal Transport/Retrieval Training and - 1 month
- Level 3+ Training at LRH

* The unit has to have a designated Consultant in-charge to give 24 hour coverage and should be involved and linked to an Obstetric Unit or Units with at least 300 deliveries a month. There should be medical officers designated to the unit on a 24 hour roster basis, separate nursing staff, ventilation facilities, Arterial Blood Gas (ABG) facilities and competence to manage all types of neonatal medical problems.

7.3 Clinical Training Programme (Overseas Training)

At a “Level 3” NICU in a centre of excellence/centre approved by the BOSP.

The main objective of this training is to expose the trainee to and secure hands-on-experience of neonatal /perinatal care in a developed health care setting, acquire new skills and technological experience, and to fine-tune the training achieved during local training. During this period the trainee is expected to master all aspects of perinatal/neonatal care with the intension of applying the knowledge and skills so learned to the local setting in the most suitable manner on his/her return to Sri Lanka. During the overseas training, the BOSP expects the trainee to specially focus on the following areas of care.

- Achieve knowledge and skills in following practical procedures and management of related complications
 - Insertion and removal of percutaneous central venous lines, peripheral arterial catheters, drainage of CSF reservoirs, thoracocentesis, paracentesis, pericardiocentesis and peritoneal dialysis.
 - To perform and interpret cranial ultrasound, abdominal ultrasound (desirable but not mandatory) and echocardiography (desirable but not mandatory)
- Pharmacological and non-pharmacological management of pain in neonates
- Achieve knowledge and develop skills with regard to “End-of-life Care” Management
- Achieve knowledge and develop skills in “Long term health care and follow up” of NICU graduates, and management of family related issues.

7.4 Research Project

Successful performance and presentation of a research project, directly relevant to **Neonatal and Perinatal Medicine** is a **mandatory requirement** to be eligible for the PBCA. This requirement cannot be fulfilled by a research related to neonatology that may have been carried out during the pre MD training.

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.

The study proposal must be *assessed and approved by the BOS before embarking on the proposed study.*

The trainee should preferably commence on the research project during the first year of local training and should complete by second year of training. It 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 BOS.

The publication should be a first author publication in a journal and the oral/poster presentation should be first author in a scientific meeting, local or overseas, approved by the BOS.

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

Please refer to the General Paediatrics Prospectus for the following

1. Format for submission of the research report
2. Assessment of project report by 02 reviewers
3. Scientific meetings for presentation and journals for publication of research

8. Learning Activities and Learner Support System

Learning will take place in a variety of settings with a range of approaches:

Acute settings

Community settings

Handover

Ward rounds

Multi-disciplinary meetings

Audits and research

E-learning

Seminars

Lecture

External training courses

Reflective practice
Self-directed learning

Most events in the workplace will contribute to the learning process. Trainees are encouraged to utilise all these opportunities as well as managing their study leave to work towards completing their personal development plan.

9. 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 methods 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 and are eligible for 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.

10. Monitoring of progress

10.1 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. He or she should liaise with the trainers and make sure that the reports are received by the PGIM on time. This includes local as well as foreign training.
Refer Annex II for progress reports

Unsatisfactory progress reports will be discussed at the BOSP and contents will be communicated to the trainee and the subsequent trainer/s, where this is deemed necessary for support purposes. The trainee will be informed of the steps taken which may involve advice, guidance, lengthening or repetition of the said training.

10.2 In Service Training Assessment (ISTA) during local training

The trainee is expected complete following assessments during this period.

- Multi-source Feedback (MSF) -3
- Directly Observed Practical Skills (DOPS) - 10
- Case based Discussions (CBD) 15 minutes per CBD -6

- Discharge Summaries and Letters (DSRL) - 4
- Evaluation of Teaching Skills- (ETS) - 2
- Communication Skills (CS) - 3

Training Component	In service Assessment
Neonatal Intensive Care Unit / SCBU (two separate training centres)	DOPS - 5 (minimum of 2 at each centre) CBD - 6 (3 at each centre) DSRL - 4 (minimum of 2 at each centre) ETS - 4 (2 at each centre) CS - 2 (1 at each centre) MSF - 2 (1 at each centre)
Paediatric Intensive Care Unit	DSRL - 1 CS - 1
Surgical Intensive Care unit	DOPS - 1
LRH – Cardiology Unit	DOPS - 2
LRH – Ultrasound Training	DOPS - 2
LRH - PBU	MSF - 1

10.3 Maintaining a log of learning activities

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

11. Eligibility for Pre – Board Certification Assessment (PBCA)

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

1. Satisfactory completion of all components of training
2. Successful completion, presentation and publication of the Research Project
3. Satisfactory progress reports of local and overseas training
4. Satisfactorily completed PTR forms

12. 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

The candidate is expected to maintain a Portfolio from the commencement of his training programme on a continuous basis. He/she is expected to update it at regular intervals. The responsibility of ensuring such remains with the trainee. The Trainer (at each respective stage) is expected to supervise and direct the trainee on compilation of the document.

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 BOSP 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 BOSP 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 BOSP.**

13. Board Certification

A trainee who has successfully completed the PBCA is eligible for Board Certification as a specialist in Neonatal and Perinatal Medicine on the recommendation of the BOSP.

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

14. Recommended reading

Textbook of Neonatology by NRC Robertson
Archives of Paediatrics- Foetal and Neonatal editions
Perinatal Clinics of North America
Assisted Ventilation of the Neonate- Goldsmith & Karotkin
Paediatrics and Child Health Journals

15. Contributors to Development and Revision of Prospectus

This document was prepared by a Sub-committee appointed by the BOSP.

The Sub-committee members are Prof. Dulanie Gunasekera and Dr. MedhaWeerasekera.

It has subsequently been ratified by the BOSP.

Annex I



**POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA
BOARD OF STUDY IN PAEDIATRICS**



MD NEONATAL and PERINATAL MEDICINE

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 :

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

<p>Medical Knowledge</p> <p>Demonstrates up-to-date knowledge required to manage patients</p>	
<p>Application of Medical Knowledge</p> <p>Shows ability to use the knowledge and other derived evidence based information</p>	
<p>Procedural Skills</p> <p>Demonstrates ability to perform practical/ technical procedures</p>	
<p>Interpersonal/ Communication Skills</p> <p>Demonstrates ability to communicate with patients and their families</p>	
<p>Clinical Judgment</p> <p>Demonstrates ability to integrate cognitive and clinical skills, and consider alternatives in making diagnostic and therapeutic decisions</p>	
<p>Responsibility</p> <p>Accepts responsibility for own actions and understands the limitations of own knowledge and experience</p>	
<p>Punctuality</p>	
<p>Problem Solving Skills</p> <p>Critically assesses information, identifies major issues, makes timely decisions and acts upon them</p>	

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 behaviour 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 analysing 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:-

Weaknesses:-

SUMMARY OF THE TRAINING YEAR

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 II

IN SERVICE TRAINING ASSESSMENT FORMS



**POST GRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA
IN SERVICE TRAINING ASSESSMENT
MD NEONATAL and PERINATAL MEDICINE**



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

Clinical problem: Respiratory CVS GI CNS 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 day old with respiratory distress):

--

Please grade the below areas using the given scale:

Grading	Unsafe	Below Expectations	Borderline	Meets expectations	Above Expectations	Well above expectations	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: -----



POST GRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA
IN SERVICE TRAINING ASSESSMENT
MD NEONATAL and PERINATAL MEDICINE



MINI CLINICAL EVALUATION (MCE)

Trainee's name: -----

Date of assessment (dd/mm/yyyy):

--	--	--

Training Center: -----

Year of training:

1	2	3	4
---	---	---	---

Clinical setting: OPD/Clinic In-patient Acute Admission

Clinical problem: Respiratory CVS GI CNS 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 day old baby with respiratory distress):-

--

Please grade the below areas using the given scale:

	Unsafe	Below Expectations	Border-line	Meets Expectations	Above Expectations	Well above Expectations	Unable to comment
	F	E	D	C	B	A	
History Taking							
Communication Skills							
Examination							
Clinical Judgment							
Initial Management							
Professionalism							
Organization/ Efficiency							

**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: -----



POST GRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA
IN SERVICE TRAINING ASSESSMENT
MD NEONATAL and PERINATAL MEDICINE



MULTI SOURCE FEEDBACK (MSF)

Trainee's name: -----

Date of assessment (dd/mm/yyyy):

--	--	--

Training Center: -----

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)

<i>Grading</i>	<i>Unsafe</i>	<i>Below Expectations</i>	<i>Borderline</i>	<i>Meets expectations</i>	<i>Above Expectations</i>	<i>Well above expectations</i>	<i>Unable to comment</i>
	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: -----



POST GRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA
IN SERVICE TRAINING ASSESSMENT
MD NEONATAL/PERINATAL MEDICINE



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: Ward-patient ETU/OPD Intensive Care unit

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: -----



POST GRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA
IN SERVICE TRAINING ASSESSMENT
MD NEONATAL/PERINATAL MEDICINE



ASSESSMENT OF TEACHING SKILLS

Trainee's name: -----

Date of assessment (dd/mm/yyyy):

--	--	--

Training Center: -----

Year of training:

1	2	3	4
---	---	---	---

Clinical setting: Ward-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: -----



POST GRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA
IN SERVICE TRAINING ASSESSMENT
MD NEONATAL/PERINATAL MEDICINE



COMMUNICATION SKILLS

Trainee's name: -----

Date of assessment (dd/mm/yyyy):

--	--	--

Training Center: -----

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: -----



**POST GRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA
IN SERVICE TRAINING ASSESSMENT
MD NEONATAL/PERINATAL MEDICINE**



Discharge Summaries, Referrals & Letters (DSRL)

Trainee's name: -----

Date of assessment (dd/mm/yyyy):

--	--	--

Training Center: -----

Year of training:

1	2	3	4
---	---	---	---

Clinical setting: Ward-patient ETU/OPD 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 III

Log of learning activities

Training component	Duration	Name & Signature of the Trainer
Level 3 Neonatal Unit in a Teaching Hospital	Six months	
Level 3 Neonatal Units in a Teaching Hospital	Six months	
Paediatric Intensive Care Training at a Tertiary Paediatric Intensive Care Unit	Two months	
Surgical Intensive Care Unit Training at LRH	One month	
Neonatal Echo cardiography / Cardiac Training at LRH	One month	
Neonatal Ultra Sound Scan Training at LRH	One month	
Neonatal Transport/Retrieval Training and Level 3+ Training at LRH	One month	

Annex IV

Portfolio

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

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

PTR forms (*Refer General Paediatric Prospectus*) should be completed according to the instructions and submitted to the PGIM every six months by the trainee. A satisfactory PTR report is a requirement for PBCA.

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

- minimum number of 10
- 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+