"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"

POST GRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA

PROSPECTUS

Board Certification in Paediatric Cardiology

(To be effective from the year 2015)

Contents

1. Background/Introduction

Paediatric Cardiology is a sub speciality in paediatric which deals with patients with congenital heart diseases and those with acquired heart diseases in childhood. Paediatric Cardiologists treat patients of all ages with congenital heart diseases and therefore cover all ages from foetus to adult.

Even though paediatric cardiology is a highly specialised area, there is great diversity within it. The paediatric cardiologist should be able to work on clinical diagnosis to highly technical echocardiographic diagnosis and should be able to manage patients with drugs to catheter based interventions. Despite the spectrum of work, all paediatric cardiologists need highly developed communication skills in order to work effectively and compassionately with patients and families affected by complex heart problems.

Being a diverse specialty dealing with patients of all ages, Paediatric Cardiology crosses a number of traditional medical boundaries. Close liaison with General paediatrics, paediatric subspecialties, cardiothoracic surgery, adult cardiology, obstetrics, radiology and pathology is required. The paediatric cardiologist in training must have a thorough grounding in paediatrics and should be capable of providing all-round patient care.

Training in paediatric cardiology includes gaining competency in diagnosis, management and treatment of congenital heart disease, acquired heart disease, arrhythmias and disturbances of circulatory function in childhood. It also involves training in diagnostic and interventional cardiac catheterizations and pre operative, intra operative and post operative assessment and management of patients who undergo cardiac surgery. In addition, acquisition of management skills, leadership and personality development, communication skills and knowledge on ethical practices are mandatory to perform as a paediatric cardiologist.

2. Eligibility for entry into training programme

Applicants should have passed the MD Paediatric Examination and should not be already Board Certified by the PGIM in any specialty or subspecialty or have already applied to be enrolled in the training programme in any other subspecialty.

3. Selection process for training programme

The candidates will be selected on the merit based ranking results of the MD (Paediatrics) Examination. The positions available will be offered to the candidates by the BOSPbased on the recommendations made by the Ministry of Health. The candidates, on the basis of the order of merit, would make the appropriate selection for training in Paediatric Cardiology.

4. Number to be selected for training

Within one month of successful completion of MD Paediatrics Examination, the candidates will be offered the training positions in Paediatric Cardiology, based on the recommendations made by the Ministry of Health. Selection will be based purely on merit order of the MD examination. Once the selection is made, the candidate would come under the general purview of the Special Committee of the BOS Paediatrics that deals with Paediatric Cardiology.

Each candidate would be allocated to two "Professional Mentors" by the BOSP. He/she would guide the trainee throughout the training programme.

5. Outcomes, competences and learning objectives

5.1. Aim

The objective of the training programme is to produce specialists in Paediatric Cardiology who should be

1. Competent in diagnosing, investigating and managing congenital and acquired cardiac disorders including cardiac arrhythmias from foetus to adulthood.
2. Liaise with cardiac Surgeons, Anaesthetist and other relevant paediatric and adult care teams to provide a holistic care for the patient with heart diseases
3. Able to play an active role in the development of Paediatric cardiology in Sri Lanka in the most cost effective way based on scientific evidence.

5.2. Learning outcomes

The trainee eligible for Board Certification in Paediatric Cardiology should have:

- acquired a sound knowledge in the anatomy and hemodynamics in relation to normal heart, antenatal and postnatal circulation, congenital and acquired heart diseases in children
- acquired an extensive knowledge of the natural and modified history of the diseases of the cardiovascular system
- developed skills in the diagnosis and management of congenital heart diseases and those acquired during childhood.
- developed skills in the diagnosis, management and counselling of Grown Up Congenital Heart Disease (GUCH) with the adult cardiologist
- developed correct attitudes for good clinical governance whether it is government sector, private sector or abroad.
- developed the skills required for the organization of paediatric cardiac services and evaluate its outcome.
- developed the skills required to conduct audits and scientific research, with a view of contributing for evidence based management and participating in the task of improving the paediatric cardiology services in the community.
- developed the skills required to be a medical resource personnel in order to impart medical education to medical society and the public.
- developed the ability to critically appraise research publications and practice evidence based medicine
- developed the ability to maintain the highest standards of professionalism, moral and ethical conduct
- cultivated the commitment to engage in continuing professional development.

6. Structure of Training Programme

6.1. Duration of training

Total duration of training is 04 years which is mandatory

Local training-	02 years
Overseas training -	02 years in an overseas cardiac centre of excellence

6.2. Local Training

The selected trainee would be appointed as a Senior Registrar for a period of 02 years to a Paediatric Cardiology unit approved by BOS in Paediatrics. The centre should preferably be a multi-consultant unit in paediatric cardiology and should cover diagnostic and interventional catheterisation and paediatric cardiothoracic surgery.

During this 02years the trainee should have three months of training in cardiac electrophysiology and one month of training in adult cardiology.

6.3. Overseas Training

The overseas component of training should be with hands-on experience in a centre/s of excellence approved by the BOSP.

It is expected that the trainee would be able to gain valuable experience in all aspects of cardiac care in such a centre. This will include the use of sophisticated facilities like cardiac MRI for diagnosis and ECMO, Ventricular assist devices for management of more complex cases.

Such exposure and training would enable them to introduce newer diagnostic and therapeutic systems to the country.

7. Curriculum and content areas

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

8. Learning activities

Method of Delivery and Learner Support System

Text book and journal oriented theory knowledge, theory and practical knowledge of special equipment, patient oriented discussions, tutorials, small group discussions, cyber learning etc.

8.1. Research Project

Successful performance and presentation of a **second research project**, directly relevant to paediatric cardiology is a **mandatory requirement** to be eligible for the PBCA, in addition to the research project that may have been carried out during the general paediatric training. The Research Project could be undertaken at any time, either in Sri Lanka or abroad. It may be either hospital based or community based and could include clinical, epidemiological, genetic or immunological components. It may be observational or interventional in type.

The trainee 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***.

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/or 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 proposal
2. Assessment of project report by 02 reviewers
3. Scientific meetings for presentation and journals for publication of research

9. Trainers and training units

9.1. Training Units

Training in Paediatric Cardiology should be based at established units accredited by the BOSP, which offer a full range of diagnostic and treatment facilities for all forms of cardiac diseases in paediatric practice.

9.2. Details of Trainers

The current panel of Board approved trainers who are Board Certified Paediatric Cardiologists with at least 03 years of experience after Board Certification would carry out the training locally. Overseas training would be carried out by recognised Consultants in Centres of Excellence. 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.

Responsibilities of a trainer

Within the 24 months of local training period the trainer should ensure that:

1. The trainee has a comprehensive knowledge on all aspects of paediatric cardiology listed in “The Learning Objectives”
2. The trainee is fully competent in performing the listed procedures with understanding of their limitations, adverse effects etc.
3. Trainee actively participates in discussions with regards to management of Cardiac diseases.
4. Joint discussions with multi- disciplinary care givers are held regularly

5. The trainee is fully competent in pre op and post op management of cardiac patients and also should be competent in counselling the parents and the child when necessary before and after cardiac surgery.
6. The trainee has sufficient access to high quality paediatric cardiology literature which is discussed regularly.
7. All relevant equipment is of sufficiently high quality to allow good training.
8. The trainee becomes familiar with counseling of patients with different cardiac conditions
9. The trainee is given sufficient time and opportunity to undertake research in the field of paediatric cardiology and to present the findings at scientific meetings and publish them in reputable journals
10. Make presentations and actively participate at combined cardiac conference with involvement of multidisciplinary teams

10. Monitoring 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.

Refer annexure II

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 in time. This includes local as well as overseas training.

Any grade more than 3 would be a satisfactory evaluation result. The grading of less than 3 would be considered as an adverse report. ***Refer annexure II for grades***

Unsatisfactory progress reports will be discussed at the Board of Study 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.

Satisfactory Progress Reports are a mandatory requirement to qualify for the Pre – Board Certification Assessment

10.2. In Service Training Assessment during local training

The trainee is expected complete following assessments during this period.

1. Multisource Feedback (MSF)- 2
2. Directly Observed Practical Skills (DOPS)- 14
3. Case based Discussions (CBD)-12 minutes per CBD -14
4. Mini Clinical Evaluation (MCE) - 4
5. Discharge Summaries & Referral Letters (DSRL) - 2
6. Evaluation of Teaching Skills- (ETS)- 2
7. Communication Skills (CS)- 2

Refer *Annex III* for assessment forms

Training component	In Service Assessment
Paediatric Cardiac Intensive Care Unit	DOPS (2), CBD (2) CS (1)
Cardiac catheterisation laboratory	DOPS (8), CBD (2)
Echocardiography laboratory	DOPS (4) CBD (4) MCE (2)
Electrophysiology training	
Adult cardiology training	CBD (1)
Paediatric Cardiology ward	CBD (5), MSF (2), ETS (2) DSRL (2) CS (1) MCE (2)

10.3 Peer Team Rating

PTR forms **(Refer General Paediatric Prospectus)** should be completed according to the instructions and submitted to the PGIM every six months by the trainee.

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 and presentation or publication of the Research Project
3. Satisfactory progress reports from 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 1V 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 BOS and approved by the Senate of the University of Colombo. A third examiner will be nominated by the BOS from outside the discipline to improve objectivity**.**

The overall assessment should be based on each of the main sections, which should be assessed as satisfactory or not on overall basis.

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

The trainee will be called for a *Viva voce* examination which will based on details provided in the portfolio.

Candidates unsuccessful in PBCA

- A trainee who is unsuccessful in 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 unsuccessful, 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.**

13. Board Certification

A trainee who has successfully completed the PBCA is eligible to apply for Board Certification as a specialist in paediatric Cardiology on the recommendation of the BOS in Paediatrics.

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

1. Moss & Adams' Heart Disease in Infants, Children, and Adolescents: Including the Fetus and Young Adult
2. Paediatric Cardiology Robert H. Anderson, MD, Edward J. Baker, MA, MD, FRCP, FRCPCH, Daniel J. Penny, MD, Andrew N. Redington, MD, Michael L. Rigby, MD, and Gil Wernovsky, MD
3. Perloff's Clinical Recognition of Congenital Heart Disease, 6th Edition By Joseph K. Perloff, MD and Ariane Marelli
4. Bedside Cardiology by Jules Constant
5. Feigenbaum's Echocardiography by William F. Armstrong MD (Author), Thomas Ryan MD (Author)
6. Echocardiography in Pediatric and Congenital Heart Disease: From Fetus to Adult by Wyman Lai (Editor), Luc Mertens (Editor),
7. Echocardiography in Pediatric and Adult Congenital Heart Disease by Benjamin W. Eidem MD FACC FASE (Editor), Frank Cetta MD FACC FASE (Editor),
8. Congenital Diseases of the Heart: Clinical-Physiological Considerations by Abraham Rudolph
9. Percutaneous Interventions for Congenital Heart Disease by Horst Sievert (Editor), Shakeel Qureshi (Editor), Neil Wilson (Editor), Ziyad M. Hijazi (Editor)
10. Diagnostic and Interventional Catheterization in Congenital Heart Disease By (author) James E. Lock, By (author) John F. Keane, By (author) Stanton B. Perry
11. Grossman's Cardiac Catheterization, Angiography, and Intervention Hardcover – October 26, 2005 by Donald S. Baim MD FACC (Editor)
12. How to Read Pediatric ECGs, by Myung K. Park MD FAAP FACC (Author), Warren G Guntheroth (Author)
13. Manual of Pediatric Intensive Care by Manoj Luthra (Author)
14. Kirklin/Barratt-Boyes Cardiac Surgery by Nicholas T. Kouchoukos MD and Eugene H. Blackstone MD

Contributors to development and revision of prospectus

The following members deserve specific mention for their contribution:
Dr. Duminda Samarasinghe, Dr. Shehan Perera, Dr. Sunethra Irugalbandara, Dr. Mangala Gunathilake, Dr. Dimuthu Weersuriya, Dr. Ruwan Morawakkorala, Dr. I.R. Ragunathan

Annexure I - Curriculum and content area

Broad core objectives

1. *Patient Care*

The ultimate aim is to provide comprehensive care and specialised services to children with cardiac disorders. The trainees are expected to acquire necessary knowledge and expertise in dealing with the very many cardiac disorders in paediatric practice. The trainees would need to determine the infrastructure facilities required for optimal care to these children and make personal and fervent efforts to acquire them into the specialised cardiac units through the agencies that are responsible for the provision of these amenities.

2. Medical Knowledge

It is expected that the trainees should acquire extensive and up-to-date knowledge on cardiac disorders during the course of the training programme. Wide reading and critical thinking including analysis of haemodynamics together with reflective documentation would be essential attributes that should be developed during the programme.

3. *Interpersonal and Communication Skills*

It is essential that the trainees develop the indispensable skills in communication and liaison with other colleagues and the staff of the different units of a medical facility with whom they have to have a constant dialogue. It is most likely that the work of the Paediatric Cardiologists would involve a multi-disciplinary approach in many instances and towards that end, proper communication with all those involved in the care of a child with a cardiac disorder would be crucial to the provision of optimal care. The trainees should also acquire the necessary skills and attitudes in maintaining a dialogue with the affected children, their parents and care-givers. Development of empathy and understanding of the problems faced by them would be an essential prerequisite to being a competent and successful paediatric cardiologist.

4. *Professionalism*

It is envisaged that the trainees in Paediatric Cardiology would act and behave in a most professional manner in all dealings with senior and junior colleagues and others involved in the management of children with cardiac disorders. This is particularly relevant in cardiac disorders as one need to secure the services of several other specialists including anaesthesiologists, cardiothoracic surgeons and para-medical categories of staff in the provision of comprehensive care to those with cardiac disorders. These attitudes and skills need to be carefully nurtured during the training programme.

5. *Practice-based and Evidence-based Approach*

The trainees are expected to acquire these approaches to the ways in which the myriad of cardiac disorders in children could be handled. Although evidence-based medicine is the cornerstone on which optimal care is based, a practice-based approach may be appropriate in certain circumstances. The skills based on both approaches need to be developed during the training programme. Trainees should have updated knowledge on guidelines and the basis for such guidelines and be able to critically analyse their application in the local setting.

Curriculum in detail

1. Clinical learning objectives

Trainee should have sound knowledge on diagnosis, investigation, treatment including medical management, intervention or surgery.

1. Assessment of Foetal cardiac anomalies
    a. Should be able to diagnose congenital heart diseases in a fetal echocardiogram and plan delivery and post delivery care
    b. Should be able to diagnose fetal cardiac arrhythmias, be able to manage them antenatally, and advise on timing of delivery
    c. Should be able to critically analyse use of Fetal echocardiography in a setting where termination of pregnancy is illegal and be able to counsel parents in such a setting.
2. Assessment and treatment of a newborn with suspected cardiac abnormality including but not limited to the following
    a. Cyanotic newborn
    b. Cardiovascular collapse in newborn period
    c. Cardiac lesions in newborns with other malformations needing surgical intervention in the newborn period (Tracheo esophageal fistula, Diaphragmatic hernia, imperforate anus)
    d. Pulmonary hypertension including primary and those secondary to other pathology
    e. Duct dependant pulmonary and systemic cardiac lesions
3. Systematic approach to a child who present with
    a. Cardiac murmurs
    b. Chest pain
    c. Syncope
    d. Palpitations or arrhythmia
    e. Stridor
    f. Cardiac failure
    g. Any other severe hemodynamic disturbance
    h. Pre participation screening for sports
4. Assessment and management of congenital heart lesions
    a. Acyanotic heart lesions
        i. Shunt lesions
        ii. Obstructive lesions
    b. Cyanotic heart lesions
    c. Coronary anomalies – ALCAPA,ARCAPA etc
    d. Anomalies of great vessels
    e. Non cardiac cyanotic lesions

5. Assessment and management of acquired heart diseases in childhood including but not limited to
    a. Rheumatic fever
    b. Kawasaki disease
    c. Endocarditis
    d. Cardiomyopathies and myocarditis
6. Assessment and management of cardiac conditions associated with genetic disorders and miscellaneous cardiac conditions like
    a. Cardiac tumours
    b. Disorders of the pericardium
7. Assessment in relation to surgery or catheter based intervention
    a. Timing and operability in univentricular repair
    b. Timing and operability in biventricular repair
    c. Timing and indications for palliative procedures like BT shunt and pulmonary artery banding
    d. Indications and contraindications for catheter based interventions
    e. Selection of patients for catheter based intervention versus surgery
8. Preoperative preparation
    a. Investigations including haematological, biochemical, microbiological, electrophysiological and relevant imaging
    b. Counselling of parents
    c. Psychological preparation of a child for cardiac surgery
9. Perioperative assessment and management
    a. Perform detailed preoperative assessment in order to provide relevant information to the surgeon
    b. Anticipate peri and post-operative problems depending on pre-operative status
10. Assessment and management of post-operative patient including but not limited to
    a. Problems related to cardiopulmonary bypass
    b. Low cardiac output state
    c. Pulmonary hypertensive crisis
    d. Residual shunts or lesions and need for re-intervention
    e. Post-operative arrhythmias like Junctional ectopic tachycardia, atrial flutter, re-entrant tachycardia, ventricular tachycardia
    f. Indications and use of inotropes and other relevant drugs in post-operative patient
    g. Pericardial and pleaural effusions
    h. Diaphragmatic palsy
11. Long term follow-up of post-operative patients
    a. After bidirectional Glenn shunt
    b. After Fontan circulation
    c. After tetralogy of Fallot repair
    d. With residual lesions
    e. indications for re-intervention

12. Diagnosis and management of arrhythmias
    a. Mechanisms in genesis of cardiac arrhythmias
    b. Medical management of arrhythmia
    c. Indications for DC cardioversion
    d. Indications for temporary pacing and management of temporary pacing
    e. Indications for exercise testing, ambulatory monitoring, cardiac event recorders, electrophysiological studies and ablation
    f. Indications for permanent pacemaker and implantable cardioverter defibrillator
13. Nutrition and growth in congenital heart disease
    a. Pathophysiology of poor growth in cardiac lesions
    b. Issues related to overfeeding in cardiac disease
    c. Optimising nutrition pre operatively
14. Paediatric cardiac and cardiopulmonary transplant
15. Diagnosis and management of Ischaemic heart disease
16. Assessment of children with cardiac problems prior to non-cardiac surgery
    a. Anticipated problems during anaesthesia
    b. Provide solutions for such anticipated problems
    c. Advise on risk involved
17. Palliative care in severe cardiac disorders
    a. Counselling parents
    b. Counselling the patient if appropriate
    c. End of life care
    d. Decide on DNR and ethical, social, and legal issues related to it
    e. Liaison with other team members like paediatrician, anaesthetist, intensivist and supportive organisations in end of life care
18. Management of GUCH
    a. Long term medical/surgical plan and options
    b. Problems anticipated
    c. Counselling – pregnancy,contraception,sports,psycho social issues

2. <u>Investigations and procedures</u>

Trainee should be able to select the appropriate investigation or procedure for the patient competently perform the procedure and interpret the results

1. Electrocardiogram
    a. Standard ECG
    b. Ambulatory ECG
    c. Exercise ECG
    d. Atrial electrocardiogram in post-operative patients
    e. ECG with adenosine challenge
    f. Loop recorder
    g. Event recorder
2. DC cardioversion
3. Operation of a Pace maker

4. Chest X Ray
5. Echocardiography
    a. Transthoracic
    b. Trans oesophageal
    c. Epicardial
    d. With contrast
6. Diagnostic cardiac catheterisation
    a. Indications for diagnostic cardiac catheterisation
    b. Pre cath planning of procedure,hardware,anticipated problems,bail out methods
    c. Selection of hardware and planning the procedure
    d. Perform catheterisation and obtain relevant hemodynamic data
    e. Perform appropriate angiography
    f. Interpret hemodynamic data
    g. Conclude findings and recommendations at the end of the procedure
    h. Radiation protection during the procedure
    i. Use of contrast
7. Emergency lifesaving procedures
    a. Pericardiocentesis
    b. Balloon atrial septostomy
    c. Retrieval of embolised devices
8. Catheter based interventions
    a. Plan, perform and interpret pre-procedure investigations
    b. Pre-procedure echocardiographic assessment to obtain relevant information and plan the catheter intervention
    c. Plan the procedure including necessary hardware for the procedure
    d. Anticipate possible complications and plan out bail out strategies
    e. Perform the procedure with the supervisor
        i. Obtain vascular access
        ii. Manipulate catheters successfully and safely
        iii. Monitor the patient throughout the procedure for hemodynamic and rhythm anomalies and rectify them without delay
        iv. Perform common interventions as the first operator under supervision

            1. Closure of PDA – coil/device
            2. Closure of secundum ASD
            3. Balloon valvotomy for pulmonary stenosis
            4. Angioplasty for coarctation or pulmonary artery stenosis
        v. Perform less common interventions with assistance
        vi. Manage anticoagulation during the procedure
        vii. Use of a snare in retrieval of dislodged hardware
        viii. Precautions in using contrast in the setting of renal dysfunction and steps to taken

f. Plan post-operative management
g. Proper documentation of the procedure including complications
h. Plan long term follow-up and drugs if indicated

9. Other skills to be acquired during the training
a. Cardiopulmonary resuscitation including airway management
b. Preparation of inotropes and other drugs used in cardiothoracic ICU
c. IT knowledge and skills required for presentations, data collection and analysis
d. Use of modern communication methods to provide better care for the patients (eg: Picture streaming for ECGs, video conferencing for echocardiography etc.)
e. Obtain others opinion whenever needed

3. Academic dexterity in communication

   Acquire all relevant competencies in communicating with parents, relatives and colleagues in the different areas of diagnosis and management of childhood cardiac disorders.

4. Teaching capabilities

   Acquire skills of teaching with the ability to tone up or down to the level at which teaching is conducted with reference to the level of knowledge of the audience.

5. Proficiency in research

   Proven capabilities in research and the ability to lead research teams and guide future research by junior colleagues.

6. Competence in Platform Oral Presentations

   Training for Platform Oral Presentations with the use of computer based text, images, real-life photography and real-time videos etc.

7. Posters and Publications

   Ability to design and present poster presentations and scientific writing for journal publications.

ANNEXURE II - PROGRESS REPORT

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA

BOARD OF STUDY IN PAEDIATRICS
MD PAEDIATRIC CARDIOLOGY

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 :

Training position :

TRAINER'S DETAILS

Full name of trainer :

Qualification :

Hospital :

Email :

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:-

Weaknesses:-

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

POST GRADUATE INSTITUTE OF MEDICINE
UNIVERSITYOF COLOMBO, SRI LANKA
INSERVICE TRAINING ASSESSMENT
MD PAEDIATRIC CARDIOLOGY

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		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	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 :

_____

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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	Well aboveexpectations	Unable to comment
	F	E	D	C	B	A	
History Taking							
Communication Skills							
Examination							
Clinical Judgment							
Initial Management							
Professionalism							
Organizational 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 : _____

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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 : _____

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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	Neonatal unit	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 : _____

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ASSESSMENT OF TEACHING SKILLS

Trainee's name				
Date of assessment(dd/mm/yyyy)				
Training Centre				
Year of training				
Clinical setting	In-patient	ETU/OPD	Neonatal unit	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 _____

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COMMUNICATION SKILLS

Trainee's name				
Date of assessment(dd/mm/yyyy)				
Training Centre				
Year of training:				
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 _____

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Discharge Summaries, Referrals & Letters (DSRL)

Trainee's name				
Date of assessment(dd/mm/yyyy)				
Training Centre				
Year of training:				
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 _____

ANNEXURE 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 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

- Narration of at least one learning event experienced by the trainee, in relation to each of the above outcomes, with reflection on what and how the trainee learned from this experience.

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+