



**POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA**

PROSPECTUS

**BOARD CERTIFICATION IN ANAESTHESIOLOGY WITH A SPECIAL INTEREST IN
TRANSPLANT ANAESTHESIOLOGY AND CRITICAL CARE**

(To be effective from the year 2018)

BOARD OF STUDY IN ANAESTHESIOLOGY

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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.

1. BACKGROUND

A surge in the number of patients with end stage organ failure in Sri Lanka has resulted in a dramatic rise in the demand for organ transplant.

Perioperative care is an important determinant of outcome for the recipient and the donor in the case of live donor transplantation. The programme leading to Board certification in Anaesthesiology with a special interest in Anaesthesia and Critical care for organ transplantation is intended to produce practitioners capable of providing care of the highest quality.

Due to the complexity of perioperative issues related to 'end stage' organ failure, optimizing donor organs, transplant surgery, postoperative complications and immune suppression, a structured training with exposure to the 'state of the art' is essential. This is to be fulfilled by the establishment of an area of Special Interest in Anaesthesia and Critical care for organ transplantation.

The future Specialist Anaesthesiologist with a special interest in Anaesthesia and Critical care for organ transplantation will be a key stakeholder in organ transplant programmes and will play a major role in improving outcomes. This programme is intended to allow trainees to acquire the skills, attitudes and knowledge required to function as a competent specialist Anaesthesiologist providing perioperative care of the highest quality to organ donors and recipients undergoing organ transplantation.

The trainees are expected to undertake future leadership roles in managing transplant programmes and in capacity building in Transplant Anaesthesia and Critical care to ensure sustained growth of this field to meet national requirements.

2. ELIGIBILITY FOR ENTRY INTO TRAINING PROGRAMME

- a) Passed the MD in Anaesthesiology examination conducted by the Postgraduate Institute of Medicine, University of Colombo
And
- b) The trainee should not be board certified by the PGIM in any other specialty or subspecialty

3. SELECTION PROCESS

Order of merit in the MD (Anaesthesiology) examination will be taken into consideration when selecting trainees. Due to the paucity of training opportunities, the trainees will be given the option of declaring the special interest in Transplant Anaesthesia and Critical care at any point of training up to the end of the initial six months of overseas training.

Based on the above, if a trainee opts for special training after completion of 12 months of local training, the trainee will be required to complete the stipulated six-month period of local training in

order to be eligible to apply for Board Certification in Anaesthesiology with a Special Interest in Anaesthesia and Critical care for Transplantation.

4. NUMBER TO BE SELECTED FOR TRAINING

The number of candidates to be selected will be predetermined by the Board of Study in Anaesthesiology and Board of Management in consultation with the Ministry of Health.

Available training opportunities will be indicated by the PGIM in the public circular for the MD Anaesthesiology examination. In case the specified number is not selected, trainees will have the option of declaring the special interest on completion of the initial six months of overseas training. The merit position and the date of declaration of interest will be considered when trainees exercise this option.

5. AIMS, LEARNING OBJECTIVES, AND CONTENT AREAS

A. Aims

The principal aims of the post MD Anesthesiology training programme leading to Board certification in Anaesthesiology with a Special Interest in Anaesthesia and Critical care for organ transplantation are for the trainee to:

1. Achieve mastery in this specific area of special interest of Anaesthesia and Critical care for organ transplantation
2. Be proficient in non-clinical skills needed for consultant practice

B. Learning objectives

In order to achieve these aims the trainee is expected to fulfill the following objectives.

1. Gain experience required to become technically competent in the practice of anaesthesia and perioperative care for organ transplantation and to master the underlying analytical and clinical principles of transplant anaesthesia and critical care
2. Achieve competence in communication and teaching skills necessary for effective practice
3. Acquire management skills to lead a center/department providing an effective service
4. Gain experience in the design and conduct of research and development projects and in critical assessment of published work
5. Develop a framework for continued professional development (CPD) including life-long habits of reading, reviewing literature, consultation with colleagues, attendance at scientific meetings and presentation of scientific work
6. Gain experience in clinical governance, benchmarking and audit through comparison of practice with established standards of care
7. Cultivate personal virtues and traits of professionalism such as honesty, integrity, responsibility, and accountability to practice as professionals in the field
8. Be conversant in the areas of law, medical ethics and human rights in relation to transplant medicine
9. Acquire the skills of leadership and management to lead teams carrying out organ transplantation
10. Experience the role of 'clinical governance' and "institutional accountability" and responsibility for continuously "improving the quality" of their services and safeguarding high 'standards of care' by striving for excellence in clinical care

11. Inculcate the value of accountability, quality assurance and improvement, clinical audit, evidence-based practice, clinical standards and guidelines and risk management
12. Network, establish links and collaborate with experts in the field of organ transplantation internationally

C. Content areas

Trainees are expected to display a thorough knowledge and expertise in the following broad areas;

- a. Pathophysiology and management of end stage organ disease
- b. Risk stratification and optimization of recipients
- c. Criteria for selection of candidates for organ transplantation
- d. Ethics and medico-legal issues
- e. Anaesthesia for the organ donor and recipient
- f. Perioperative, multi-disciplinary care including organ support
- g. Immune suppression and associated issues
- h. End of life care
- i. Setting up a transplant programme
- j. Communication with family, transplant teams, care givers and administrators
- k. Continuous professional development and evidence based medicine
- l. Research, benchmarking and quality assurance
- m. Use of information technology
- n. Undergraduate and postgraduate teaching

Details of learning objectives, content areas, and competencies are given in [Annexure 1](#).

6. STRUCTURE OF TRAINING PROGRAMME

Training period

The post MD training consists of full time 'Hands on training' in anaesthesia and critical care for a minimum period of 12 months in Sri Lanka and 12 months at an overseas training centers accredited by the Board of study in Anaesthesiology. During the local training period, 6 months should be spent under recognized trainers in training centers where organ transplantation is carried out. During overseas training, 6 months should be spent at a training center where organ transplantation is carried out. This period of specialized training should include a minimum of 6 months each of anaesthesia and critical care.

The prospectus indicates the minimum requirements of training. The trainees must proactively widen the scope of the training in line with the objectives.

The 12 months of local training shall include

- a) Participation in multidisciplinary team meetings on perioperative care of the organ donor, harvesting of organs and transplantation.
- b) Attendance of at least one regional/ international meeting on transplantation annually.
- c) Organization of transplant related teaching programmes for junior trainees, nurses and ancillary staff

- d) An optional fellowship at a regional center of excellence in transplantation arranged in consultation with the Supervising consultant with the approval of the Board of study in Anaesthesiology.

Training centers for the six months of specialized local training

- a) Two (2) months at North Colombo Teaching Hospital, Ragama
- b) Two (2) months at National Hospital of Sri Lanka
- c) One (1) month at Teaching Hospital, Kandy
- d) One (1) month at Teaching Hospital, Peradeniya

With the concurrence of the trainer, the trainees should make use of training opportunities outside of the center whenever they become available.

Training centers for the remaining six months of local training

- a) Three (3) months of Medical/ Surgical/ Paediatric surgical critical care at a teaching hospital
- b) Two (2) months of General Anaesthesia at a teaching hospital
- c) One (1) month of Medicine – including a combination of two of the following specialties: nephrology, hepatology, cardiology, pulmonology, transfusion medicine at a teaching hospital.

7. LEARNING ACTIVITIES

7.1. At the Pre-board certification assessment, the trainees are expected to produce proof of,

- Certification in Advanced life support
- Certification in Advanced trauma life support
- Certification in ultrasound in anaesthesia and critical care
- Certification in advanced airway management
- Competence in transesophageal echocardiography
- Competence in techniques of medical education
- Competence in medical statistics
- Competence in information technology
- Understanding of medical ethics and professionalism
- Maintenance of a training portfolio
- Conduct of a research project

7.2. RESEARCH AND PUBLICATIONS:

The trainee is expected to

- a. Initiate and complete a research project. The research should be in an area directly related to transplant anaesthesia or Critical care
(See [Annexure 2](#) and [Annexure 3](#))
- b. Submit a research report
- c. Submit proof of at least one publication in a peer reviewed journal as the principal author of research conducted in a related field during the period of advanced training
- d. Submit proof of a minimum of one oral/ poster presentation in a transplant related area during the period of advanced training

8. TRAINING PORTFOLIO

The training portfolio should encompass all of the following learning outcomes and contain evidence of achievement of these outcomes by the trainee. (Details are given in [Annexure 4](#))

- i. Subject expertise
- ii. Teaching
- iii. Research and publications
- iv. Ethics and medico-legal issues
- v. Information technology
- vi. Life-long learning
- vii. Reflective practice

9. TRAINERS AND TRAINING UNITS

Accredited trainer, mentor, and training units

An accredited trainer is a Specialist with at least 3 years' experience after board certification as a specialist anaesthesiologist and is a designated anaesthesiologist in a unit carrying out organ transplantation.

Each trainee will be allocated to a designated trainer at a training center for a specified period of training.

Each trainee will be allocated a mentor for the period of post MD training. The mentor shall be an accredited trainer in transplant anaesthesia.

Training units must be accredited by the Board of Study in Anaesthesiology as suitable for training in organ transplantation based on annual audits including data on the number of transplants carried out, the conduct of clinics and provision of educational and research activities.

10. MONITORING PROGRESS

Workplace based assessments

- a. The following workplace based assessments are used as part of the assessment process. The completed forms must be included in the training portfolio. The forms to be used are included as annexures. A minimum of 80% of workplace based assessments in each domain should be completed in order to be eligible to apply for PBCA
- a. Anaesthesia list management tool (ALMAT) – ([Annexure 5](#))
- b. Direct observation of procedural skills (DOPS) – ([Annexure 6](#))
- c. Critical care clinical evaluation exercise (I-CEX) - ([Annexure 7](#))
- d. Anaesthesia clinical evaluation exercise (A-CEX) – ([Annexure 8](#))
- e. Case based discussions (CBD) – a minimum of 10 case based discussions must be completed to indicate the breadth of exposure and reflective practice. ([Annexure 9](#))
- f. Trainee evaluation form for trainers ([Annexure 10](#))

- g. Acute care assessment tool (ACAT)
- h. Professionalism observation forms
- i. Multi-source feedback – forms down loaded from the PGIM website should be completed and submitted through the respective trainers to the Medical Education Resource Center (MERC).
- j. Reflective practice guideline for trainees ([Annexure 11](#))

11. ELIGIBILITY FOR PRE-BOARD CERTIFICATION ASSESSMENT

The following criteria must be fulfilled before a trainee is eligible for the PBCA.

- b. Completion of the required period of training to the satisfaction of the Board of study in Anaesthesiology
- c. Satisfactory progress reports to cover the **entire** period of training
- d. Submission of training portfolio and satisfactory completion of workplace based assessments. A minimum of 80% of workplace based assessments in each domain should be completed in order to be eligible to apply for PBCA
- e. Completion of the research project and approval of the research report by the Board of study in Anaesthesiology
- f. Evidence of oral/poster presentations on transplant related topics at a local/ international meeting
- g. A publication on a transplant related topic in a peer reviewed journal

12. FORMAT OF PRE-BOARD CERTIFICATION ASSESSMENT (PBCA)

The Pre Board Certification Assessment will be based on assessment of a training portfolio maintained by the trainee during the period of post-MD training.

Training portfolio assessment:

The training portfolio will be reviewed at least every 6 months by the local supervisor(s), with regular feedback to the trainee on how the training portfolio may be improved. When the trainee is eligible for PBCA, 3 copies of the completed training portfolio should be submitted to the PGIM Examinations Branch.

The trainee will be required to make a 10-15 minute presentation covering the post MD training including both local and overseas components at the PBCA.

Pre-board certification assessment (PBCA):

The PBCA will take the form of a final, summative assessment of the trainee's training portfolio, carried out by 3 examiners appointed by the Board of Study in Anaesthesiology. The third examiner should be from outside the discipline.

The viva examination will include

1. A presentation of 10-15 minutes on the post-MD training
2. Interview based on the training portfolio
3. Interview on reflective practice

The overall assessment will be based on each of the main sections: presentation, training portfolio, reflective practice. Each section shall be assessed as satisfactory or unsatisfactory. Marking scheme for the Pre-Board Certification Assessment (PBCA) – ([Annexure 12](#))

If the examiners are of the view that the trainee's performance is satisfactory, the Board of study will be informed as such. If the performance is unsatisfactory, the examiners must provide the trainee with written feedback on how the performance should be improved in order to reach the required standard. The trainee should then re-submit the training portfolio within a specified period of time (up to 6 months) and face another interview based on the re-submitted training portfolio. If the trainee is successful at this second attempt, the date of Board Certification should be backdated as done routinely. If unsuccessful, the date of Board Certification will be the date of passing the subsequent PBCA following further training for a minimum period of six months in a unit selected by the Board of study.

13. BOARD CERTIFICATION

A trainee who has successfully completed the Pre-Board Certification Assessment is eligible for Board Certification as a Specialist in Anaesthesiology with a Special interest in Transplant Anaesthesiology and Critical care, on the recommendation of the Board of study in Anaesthesiology, Postgraduate Institute of Medicine, University of Colombo.

14. RECOMMENDED READING – [ANNEXURE 13](#)

15. CURRICULUM DEVELOPMENT COMMITTEE

Professor Anuja Abayadeera – Professor in Anaesthesia, Faculty of Medicine, University of Colombo

Dr Bhagya Gunetilleke – Senior Lecturer in Anaesthesia, Faculty of Medicine, University of Kelaniya

Professor Vasanthi Pinto – Professor of Anaesthesia and Critical care, Faculty of Medicine, University of Peradeniya

Dr Manoj Edirisooriya – Consultant Intensivist, Medical intensive care unit, National hospital, Colombo

ANNEXURE 1 - LEARNING OUTCOMES AND COMPETENCIES

1. Learning outcomes

By this stage of training, the vast majority of outcomes are generic across all areas of clinical practice in Anaesthesia and Perioperative care. They have been divided into nine generic domains and the specific domain of Transplant Anaesthesia and Critical care as follows:

Domain 1: Clinical Practice

Domain 2: Team work

Domain 3: Leadership

Domain 4: Innovation

Domain 5: Management

Domain 6: Education

Domain 7: Airway management skills

Domain 8: Haemodynamic monitoring and management

Domain 9: Information technology, research and publication

Domain 10: Anaesthesia & Critical care for organ transplantation

Domain 11: Research & publications

2. Competencies

Outcomes as assessed by competencies in the specified domains are stated below.

Assessment method decode
A- Anaesthesia Clinical Evaluation Exercise [A-CEX]
C - Case Based Discussion [CBD]
D - Direct Observation of Procedural Skills [DOPS]
E - Examination
I - Critical care Medicine Clinical Evaluation Exercise [I-CEX]
L - Anaesthesia List Management Assessment Tool [ALMAT]
M - Multi-source Feedback/ Peer team rating [MSF/PTR]
S - Simulation
T - Acute Care Assessment Tool [ACAT]
V - Viva (Training portfolio assessment and PBCA)

Competencies	Assessment method
Domain 1: Clinical practice	
Highly specific clinical competencies are not identified as each trainee's focus and career intention will be different and, in many cases, be dependent upon the availability of patients that present uncommon challenges; knowledge and skills are combined as this is most appropriate at the intended level of practice	
Demonstrates mastery of all aspects of clinical care in all clinical situations regularly encountered in the practice of anaesthesia and critical care for organ transplantation and shows clear understanding of: <ul style="list-style-type: none"> • effective decision making, communication, team-working and organization skills required by Anaesthesiologists to ensure clinical care is delivered safely, efficiently and effectively to the benefit of both patients and the organization; this implies an ability to recognize the importance of providing overall leadership of the multi-disciplinary team when necessary • how to utilize the time allocated to clinical sessions effectively for patient care, without compromising safety • the central role human factors plays in developing a culture of safe practice and how collaboration and team working enhances safety 	L,M
Demonstrates and teaches safe behaviour in 'prescribing' to all members of the multi-disciplinary team	A,C,L,M
Demonstrates how to communicate/ obtain consent from patients/ family members in all situations showing compassion and understanding.	A,M
Demonstrates safe practice in clinical care in those less common clinical situations in the chosen area of practice where mastery has not yet been achieved	A,C,L,M
Shows mastery in some complex clinical situations when patients requiring difficult or dangerous interventions, providing advice to other team members and participating in the planning of complex procedures	A,C,L,M
Reflects on own clinical practice in order to achieve insight and: <ul style="list-style-type: none"> • Strives to correct deficiencies • Seeks learning opportunities and integrates new knowledge into clinical practice 	M
Identifies opportunities to promote changes in lifestyle and other actions which will improve health and/or disease outcomes positive	M
Provides appropriate advice to others regarding the proper management of clinical problems	M
Shows the insight necessary to guide the choice of audit cycles/quality improvement projects in developing practice	M
Promptly acknowledges mistakes and mishaps and demonstrates the ability to lead in managing errors including: <ul style="list-style-type: none"> • Talking to patients about untoward events, apologizing appropriately, providing clear explanations acting with integrity and offering the necessary support • Leading de-briefs with all the staff involved • Implementing procedures to effect a full investigation • Openness and honesty at all times 	M

<ul style="list-style-type: none"> • The ability to learn from the errors and lead safety improvements to minimize likely recurrence 	
Domain 2 – Team working Trainees are expected to demonstrate the necessary team working, management and leadership skills required as a specialist for independent practice	
Participates in [and leads when appropriate] the organization of complex interventions, including liaison with clinicians, nurses, clinical support specialties and managers	M
Demonstrates an ability to engage all members of the team, when required, to enable the session time to be used efficiently and effectively for the benefit of both the patients and the organization; this implies an ability to lead the discussions in a timely and effective manner where/when necessary	L,M
Recognizes own limitations and actively seeks the advice of others when needed	M
Commits to the principle that the patient and their relatives are often equal members of the clinical team	M
Demonstrates leadership in engaging other healthcare professional and support workers positively and: <ul style="list-style-type: none"> • Gives weight to contributions of others • Respects team decisions and is moderate in word and manner when necessarily registering their dissent • Understands that other team members may be experiencing strong emotions which must be recognized 	M
Always shows appropriate understanding and control of their emotions when working with others	M
Understands the particular ways of working of the highly specialized teams in which they contribute	M
Teaches others how to work properly in teams	M
Demonstrates a desire to achieve high standards and monitors compliance to standards by the whole team	M
Demonstrates the importance of maintaining high levels of individual and team situation awareness at all times; asks for, or shares, information and anticipates future problems to maximize safe practice	M
Adopts strategies to reduce risk [e.g. the use of the WHO Safe Surgery Checklist] and a willingness to participate in improvement strategies [e.g. critical incident reporting]; acts to rectify error immediately if it is made	L,M
Demonstrates openness when talking to patients about untoward events, apologizing appropriately, providing clear explanations, acting with integrity and offering the necessary support	M
Shows ability to learn from errors and shares that learning with the rest of the organization	M
Domain 3: Leadership	
Understands that the role of the specialist involves demonstrating leadership in clinical management, service delivery and forward planning	M
Is aware of their position as an important positive role-model for others	M

Demonstrates commitment to the highest clinical standards personally and encourages others to achieve the best	M
Shows flexibility in accommodating the needs and work patterns of others and a preparedness to work flexibly in order to allow cover of unpredictable duties [e.g. the unavoidable absence of a colleague] to maintain essential clinical care to patients	M
Able to take the lead where appropriate in dealing with difficulties that have arisen in the clinical care of patients including communicating bad news, participating in clinical review and liaising with managers and dealing with complaints	M
Creates opportunities to bring colleagues together to further clinical and institutional goals including reducing unnecessary resource usage [environmental and financial] in all healthcare	M
Demonstrates the ability to communicate clearly, promptly and effectively with colleagues by means appropriate to the urgency of the situation [e.g. personal presence, telephone, email, letter etc.] and recognizing its crucial importance when transferring responsibility for patient care [e.g. at handovers]	M
Analyses information about performance from a wide range of resources; participates in [and if appropriate initiates and leads] initiatives to improve performance	M
Domain 4: Innovation	
Demonstrates understanding of the need to be aware of new trends and developments and; <ul style="list-style-type: none"> • Questions the status quo • Actively looks for ways to improve clinical practice and the patient experience • Commits to the changing roles and responsibilities of healthcare groups as practice develops • Is receptive to the attempts of others to improve practice • Urges responsible individuals and groups to seek and implement beneficial change 	M
Understands the importance of research [clinical and laboratory] in the development of clinical practice in their chosen area[s], is aware of current areas of research and achieves competence in understanding, and explaining, the methodology and statistics involved	M
Domain 5: Management	
Commits to the objectives of their team, of their hospital and to the national planning of healthcare	M
Plans their work efficiently so that they can accomplish the targets they have set themselves and meet institutional objectives	M
Understands the central role of the patient and the public in determining directions and priorities in service development	M
Takes the initiative in: <ul style="list-style-type: none"> • Demonstrating the efficient use of resources and encouraging others to do the same • Identifying and reporting any significant deficiency of resources • Contributing to discussions and planning for service and facilities development 	M

<ul style="list-style-type: none"> Procuring equipment which is of high quality and affordable in a transparent manner 	
Domain 6: Education	
Continuously seeks to improve and update their knowledge and skills, using a variety of strategies, whilst keeping records of learning that are planned and undertaken, reflecting on their outcomes	M
Develops a personal learning network of individuals and organizations by attending specialist educational meetings and reads specialist journals in special interest areas of practice	M
Is able to receive feedback appropriately for the purpose of self-improvement and provides feedback to others when asked	M
Commits to the supremacy of patient safety issues in providing an appropriate level of clinical or educational supervision	M
Actively participates in the planning and delivery of departmental teaching and training	M
<p>Understands the roles and responsibilities of Clinical and Educational Supervisors; this includes:</p> <ul style="list-style-type: none"> Understanding the assessment strategy employed by the Board of study in Anaesthesiology Committing to the importance of assessing and evaluating learning Understanding the importance of providing timely, specific, non-judgmental and developmental feedback and is able to do so effectively Understanding the role of and appropriate conduct of the workplace-based assessments and is able to perform accurately and reliably Knowing how to raise concerns about a poorly performing trainee Understanding the responsibilities of clinical trainers as defined by relevant national organizations and regulators As a trainer, understands and accepts the role of trainee feedback of trainer performance 	M
Understands the roles and responsibilities of educational agencies involved in educational commissioning and governance, SLMC, Ministry of Higher Education and Health, PGIM, Board of Management, Boards of study, Specialty Boards and the Professional colleges	M
Domain 7: Airway and ventilation Management	
<p>Learning objectives:</p> <ul style="list-style-type: none"> Gain mastery in the delivery of safe and effective peri-operative and anaesthetic care to patients with complex airway and ventilation related problems. Demonstrating the necessary multi-disciplinary leadership, communication and team-working skills. Show the decision making and organizational skills required of an anaesthesiologist <ul style="list-style-type: none"> in decisions on airway management in difficult situations Provide teaching to less experienced colleagues of all grades 	

<ul style="list-style-type: none"> Be familiar with recent developments in airway management and ventilation, evaluate these developments and utilize them in practice 	
Shows in-depth knowledge of issues related to the management of difficult airways, including the use of novel airway techniques	A,C
Shows in-depth knowledge of issues related to the management of ventilation, including the use of novel ventilatory techniques	A,C
Demonstrates mastery in endotracheal intubation and percutaneous tracheostomy	A,D
Demonstrates mastery in performing fiberoptic intubation, awake and asleep, for elective and emergency cases including for those with major airway pathology	A,D
Demonstrates mastery in providing safe and effective mechanical ventilation in the perioperative period including the use of novel techniques	A,D
Demonstrates mastery in ultrasound evaluation of the lung	A,D
Demonstrates expertise in the management of difficult paediatric airways that may present in any non-specialist hospital	A,D
Domain 8: Haemodynamic monitoring and management	
<ul style="list-style-type: none"> Gain mastery in the delivery of safe and effective peri-operative haemodynamic stability 	
Shows in-depth knowledge about all issues related to the cardiovascular derangements in the perioperative period, associated with end stage organ dysfunction and monitoring and management of such conditions	A,C
Shows in-depth knowledge of the pharmacology of drugs used in the management of cardiovascular derangements	A,C
Demonstrates mastery in management of transplant related haemodynamic derangements including, <ul style="list-style-type: none"> Placement of arterial catheters, central venous and pulmonary artery catheters Setting up cardiac output monitors including pulmonary artery thermodilution, PiCCO, LiDCO, trans-oesophageal echo cardiography, oesophageal Doppler and other novel techniques. Setting up extracorporeal devices such ECMO, renal replacement, liver dialysis Selection of appropriate pharmacologic interventions 	A,D A,D A,D A,D
Domain 9: Information technology, research and publication	
Objectives <ul style="list-style-type: none"> Competence in the use of information technology to store data including the creation of databases, search, retrieve, process and disseminate information, Ability to critically evaluate research and base practice on the best evidence. Working knowledge of medical statistics Ability to design, conduct research, prepare manuscripts meeting the requirements peer reviewed journals.	
Knowledge: Knowledge in information technology, research methodology and statistics	V
Completed research project (<u>audits are not acceptable for this purpose</u>) in an area directly related to Transplant Anaesthesia or Critical care	V

<ul style="list-style-type: none"> • Oral or poster presentations at scientific meetings • A minimum of one publications in peer reviewed journal as the principle author of research conducted in a related field during the period of advanced training 	V V
Domain 10: Anaesthesia and Perioperative care of the organ donor and recipient	
Learning outcomes: <ul style="list-style-type: none"> • Gain mastery in the delivery of safe and effective anaesthesia and perioperative critical care to patients undergoing organ transplantation and in doing so demonstrating the necessary multi-disciplinary leadership, communication and team-working skills necessary to ensure the care delivered benefits both the patient and the organization, • Gain mastery in the management of organ donors (live, DBD -donation after brain death, DCD-donation after cardiac death) 	
Knowledge <ul style="list-style-type: none"> • An in-depth knowledge of patho-physiology of organ systems in relation to both acute and chronic end stage organ disease, organ transplantation and re-transplantation 	A,C
<ul style="list-style-type: none"> • An in-depth knowledge of nephrology, hepatology, endocrine medicine, gastroenterology, cardiology, neurology, respiratory, neurology, coagulation, fluid, acid base and electrolyte balance relevant to end stage organ failure and transplantation. 	A,C
<ul style="list-style-type: none"> • Knowledge of indications and contraindications for transplantation and the criteria for recipient selection and risk stratification 	A,C
<ul style="list-style-type: none"> • The indications and contraindications for transplantation and the criteria for recipient selection and risk stratification 	A,C
<ul style="list-style-type: none"> • Knowledge of assessment and optimization of potential DBD and DCD donors. 	A,C
<ul style="list-style-type: none"> • Knowledge of assessment and optimization of potential live donors. 	A,C
<ul style="list-style-type: none"> • Knowledge of organ matching and procurement processes 	A,C
<ul style="list-style-type: none"> • Knowledge of ethical and medico legal requirements and related processes 	A,C
<ul style="list-style-type: none"> • Knowledge of the individual and social issues related to organ donation, transplantation, consent, end of life care 	A,C
<ul style="list-style-type: none"> • Knowledge required to pre-operatively assess, optimize and anaesthetize a recipient. 	A,C
<ul style="list-style-type: none"> • Knowledge of the pharmacology of anaesthetic and other agents and their associated effects on the organ systems. 	A,C
<ul style="list-style-type: none"> • Knowledge of the pharmacology of drugs used in the treatment of end-stage organ disease, their interactions and implications for Anaesthesia and Critical care 	A,C
<ul style="list-style-type: none"> • Knowledge of the pharmacology of immunosuppressant medication, monitoring, side effects and interactions 	A,C
<ul style="list-style-type: none"> • Knowledge of the immunology, pathophysiology and pharmacology of treatment of acute and chronic rejection 	A,C
<ul style="list-style-type: none"> • Understand the pathophysiology and principles of managing different clinical scenarios related to organ transplantation including, transplant failure, re-transplantation, fulminant organ failure, sepsis 	A,C

<ul style="list-style-type: none"> Knowledge of complex surgical techniques used in organ transplantation and implications for anaesthesia and critical care 	A,C
<ul style="list-style-type: none"> Knowledge in interpreting thromboelastometry and in the use of blood products/ treatment of coagulopathy 	A,C
<ul style="list-style-type: none"> Knowledge of reperfusion phenomena and its management 	A,C
<ul style="list-style-type: none"> Knowledge of recent developments in perioperative care in this area, to evaluate these developments and to incorporate them into local practice, advice colleagues/ trainees 	A,C
<ul style="list-style-type: none"> Knowledge in designing transplant operating theaters, Critical care units, staffing, assessing and procuring equipment 	A,C
<ul style="list-style-type: none"> Knowledge of Crisis resource management, human resource management, medical education, networking and other relevant non-technical soft skills 	S
Skills Competence in the evaluation and management of patients with end-stage-organ disease including <ul style="list-style-type: none"> Preoperative assessment, administration of anaesthesia and postoperative management for Organ harvesting Organ transplantation including Liver, pancreas, kidney, intestinal and multi-visceral transplantation management of patients with advanced end-stage organ dysfunction and related complications 	A,C,L,D,M
<ul style="list-style-type: none"> Setting up operating theaters for cadaveric and living donor transplantation 	A,L,M
<ul style="list-style-type: none"> Prevention and management of reperfusion phenomena 	A,D
<ul style="list-style-type: none"> Use of rapid infusion devices. 	A,D
<ul style="list-style-type: none"> Monitoring and management of coagulopathy, use of thromboelastometry and in the selection and use of the blood products drugs and management of associated complications. Post-operative Critical care management the living donor and the recipient Setting up renal replacement therapy, plasma exchange and liver dialysis in coordination with relevant specialists Organizing Multidisciplinary team meetings and mortality morbidity meetings Carry out multi-disciplinary ward rounds in a transplant Critical care Unit 	A,C,I,D A,C,M I,M M M
<ul style="list-style-type: none"> Administration of Anaesthesia/ conscious sedation for procedures at remote locations eg. Trans arterial chemo embolization 	A,L,D
<ul style="list-style-type: none"> Teaching undergraduate and postgraduate students, nurses and ancillary staff 	M,V
Domain 11: Research and publications	
Knowledge in research methodology and statistics	A,C
Completed research project (<u>audits are not acceptable for this purpose</u>) in an area directly related to Transplant Anaesthesia or Critical care	V
<ul style="list-style-type: none"> Oral or poster presentations at scientific meetings Publications in a peer reviewed journal as the principle author of research conducted in a related field during the period of advanced training 	V V

ANNEXURE 2 - FORMAT OF DETAILED PROJECT PROPOSAL

Section 1

1. Name of trainee:
2. Name(s) of supervisor(s):
3. Training centre:

Section 2

1. Project title:
2. Introduction:
 - a. Background and justification
 - b. Literature Review
3. Objectives of study:
4. Research plan:
 - a. Design
 - b. Setting
 - c. Method
 - d. Sample size and sampling techniques
 - e. Outcome measures
 - f. Statistical analyses and plan of presentation of results
 - g. Ethical considerations
 - h. Work plan and time lines
5. References:
6. Funding for study:
7. Signature of trainee:

Section 3

Recommendation of supervisor(s):

Signature of Supervisor 1

Signature of Supervisor 2

Date

Date

Section 4

Date of submission to PGIM

Date of approval by BOS

Signature of Secretary BOS

ANNEXURE 3 - FORMAT OF RESEARCH REPORT

General instructions

It is essential to start writing the research report early and in all cases before the data collection is completed. At the same time, you should make arrangements to have your manuscript word processed. Your supervisor should be consulted before you start to write and thereafter at regular intervals. It is much easier to make corrections if the draft is double-spaced and printed on only one side of the paper.

The past tense should be used. To avoid exceeding the given word limit, it is suggested that an approximate running total is kept. The metric system and the International System (SI) of units should be used whenever possible.

Length

An ideal length of text is approximately 5000 words, which equals to about 20 pages. With figures, references, etc., the total length is likely to be in the region of 30-40 pages.

Number of copies

Three copies should be submitted to the Director/PGIM, spiral-bound. One will be retained in the PGIM, two copies will be sent to the examiners.

Layout

The research report should be word-processed and printed single-side only, on A4-size photocopying paper.

Layout of typescript

There should be 1.5" on left-hand and top margins, and 1.0" on right-hand and bottom margins. It is especially important that the left-hand (binding) margin is of the regulatory size.

Line spacing should not be less than 1.5.

Lettering should be in Times New Roman, font size 12.

All pages should be numbered consecutively throughout, including appendices. Page numbers should be inserted in the bottom right hand corner.

Tables, diagrams, maps and figures

Wherever possible, these should be placed near the appropriate text. Tables should be numbered in continuous sequence throughout the research report. Maps, graphs, photographs, etc., should be referred to as Figures. Each of these should also be numbered in a continuous sequence. Colour should be avoided in graphic illustrations (unless it is essential) because of the difficulty of photographic reproduction; symbols or other alternatives should be used instead.

Notes

Notes, if essential, should be inserted, in reduced font, at the foot of the relevant page. If too voluminous for this to be practicable, they should be placed in an Appendix. Notes may be typed in single spacing.

Abbreviations

Where abbreviations are used, a key should be provided.

Preliminaries

The preliminaries precede the text. They should comprise the following:

1. Title page

Title of research report

Author's name

Postgraduate Institute of Medicine

University of Colombo

Date of submission

2. Statement of originality: The work presented in the research report should be the trainee's own and no part of the research report should have been submitted earlier or concurrently for any other degree. The statement should be signed by the author, and countersigned by the supervisor.
3. Abstract: Should be structured (introduction, objectives, method, results, conclusions). Should not include figures, tables, graphs or references should be limited to 500 words or less.
4. Table of contents: The table of contents immediately follows the abstract and lists in sequence, with page numbers, all relevant divisions of the research report, including the preliminary pages.
5. List of tables: This lists the tables in the order in which they occur in the text, with the page numbers.
6. List of figures: This lists all illustrative material (maps, figures, graphs, photographs etc.) in the order in which they occur in the text, with the page numbers.
7. Acknowledgments:

Text

The research report should be divided into clearly defined chapters. Chapters may be subdivided and a decimal number system can be helpful to identify sections and subsections. Topics of the sections should not be mixed, e.g. Results should not appear in the Materials and Methods.

Section 1 – Introduction: The current position and the reasons for carrying out the present work (Rationale /Justification and problem/s identified and quantified.) Hypothesis and expected outcome, impact and relevance of the study should be stated. Generally, only a few references should be cited here.

Section 2 – Literature Review: This section should be reasonably comprehensive, and most of the references to be quoted normally appear here. The relevant references dealing with the general problems should be reviewed first and this should be followed by a detailed review of the specific problem. The review is in many cases approached as a historical record of the development of knowledge of the subject.

Section 3 – Objectives: Clearly defined, general, specific and any subsidiary objectives should be stated.

Section 4 – Materials and Methods: Appropriate study design to address the objectives with clear detailed description of subjects, sampling technique and sample size, interventions, data collection and management. The study should be, internally valid and reproducible. Where specific details are available in the literature, reference should be made to the original papers, and comments kept to a minimum. If modifications have been made to the published techniques, these should be described in full. Appropriate statistical tests planned should be mentioned and ethical issues addressed.

Section 5 – Results: Presentation of data should be done in a logical sequence commencing with the basic / baseline characteristics of the subjects. Summarize the data with a figure, table or graph when appropriate. Present appropriate statistical analyses and interpretations. Each figure, table or graph should be complete and clear without reference to the text. Concise explanations in legends

and explanation of abbreviations are needed. The text should complement the figure, table or graph not simply describe them but should give valid interpretations of the results. Complete (raw) data should not be included but should be contained in tables in an Appendix if needed. Only data from the present study should be included and in particular no comparison should be made at this stage with results from other studies.

Section 6 – Discussion: Interpret and explain the results so as to provide answers to the study question(s). Comment on the relevance of these answers to the present knowledge of the subject. Consider alternate interpretations. Comment on interesting or unexpected observations and about the method. Critically compare the results with results and conclusions of other published studies within and outside the country, and explain possible reasons for any differences observed. Comment on unexpected outcomes. Comment on further follow-up research required on the subject.

Section 7 – Limitations: Any inherent and / or inadvertent limitations / biases and how they were dealt with should be described.

Section 8 - Conclusions and recommendations: Based of the results of the study and to address the objectives.

References

These are given so that the reader can refer to the original papers for further study. Uniformity is essential, but errors and inconsistencies are very common and authors are advised to check the references most carefully. Examiners will mark students down for inconsistencies in their references, either omissions or failure to follow the recommended format as given in the following section.

References are very important and must be complete and accurate. All literature referred to should be listed in a consistent form and style, and must contain sufficient information to enable the reader to identify and retrieve them.

There are different styles of citing sources, listing references and compiling a bibliography. The Vancouver style which is widely accepted in scientific writings is recommended.

List all references that are cited in the text, using the Vancouver System.

Type the references double - spaced in the Vancouver style (using superscript numbers and listing full references at the end of the paper in the order in which they appear in the text). Online citations should include date of access. Use Index Medicus for journal names. If necessary, cite personal communications in the text but do not include in the reference list. Unpublished work should not be included.

References should be listed in the following style:

The arrangement of the references at the end of the research report should be in numerical order as they are cited in the text.

The order of the items in each reference should be:

- a) For journal references: name(s) of author(s), title of paper, title of journal, year, volume number, and page numbers.
- b) For book references: name(s) of author(s), title of book, edition, volume, town of publication, publisher. year, chapter and/or page number Authors' names should be arranged as follows:

Smith CO, James DE, Frank JD

Where an author's name is repeated in the next reference it should also be spelt out in full. The title of the paper is then included, without quotation marks the journal title should be unabbreviated, *in*

italics, and be followed by year; **volume number in bold** (the issue /number): and the first and last page numbers.

- 1 Mathiesen ER, Ringholm L, Damm P. Still birth in diabetes pregnancy. *Clinical Obstetrics and Gynaecology* 2011; **25**(1): 105 – 111.
- 2 Lestrud S. Broncho Pulmonary Dysplasia. In: Nelson Text Book of Pediatrics. 18th Ed, Vol 1: Saunders, Elsevier New Delhi, India. 2008. 1840-1841
- 3 World Health Organization. Priority Medicines for Mothers and Children 2011. Department of essential medicines and pharmaceutical policies. Geneva, World Health Organization 2011 (WHO/EMP/MAR/2011.1).

Websites

Author's name (if available) must be listed first, followed by the full title of the document in *italics*, the date of publication or last revision (if available), the full http address (URL). And the date accessed in parentheses.

Examples:

- 1 National Institute for Health and Clinical Excellence. Induction of Labour NICE Clinical Guideline 70, 2015. available at <http://www.nice.org.uk/CG070fullguideline> (Accessed 21 October 2015)
- 2 Hofmeyr JG. Antenatal corticosteroids for women at risk of preterm birth: RHL Commentary (last revised 2 February 2015) The WHO Reproductive Health Library 2015, Geneva, World Health Organization www.who.int/rhl. (Accessed 21 October 2015)
- 3 Crowther CA, Hardin JE. Repeat doses of prenatal corticosteroids for women at risk of preterm birth for preventing neonatal respiratory disease. Cochrane Data Base of Systematic Reviews 2015, Issue 3. Art .No: CD003935. DOI: 10.1002/ 14651858. CD003935 pub 2. (Accessed 21 October 2015)

ANNEXURE 4 - TRAINING PORTFOLIO AND TRAINING PORTFOLIO ASSESSMENT

The Pre-board Certification Assessment (PBCA) is to assess whether the trainee has acquired the following broad outcomes to function as specialist in the chosen subspecialty.

- Subject expertise
- Teaching
- Research and audit
- Ethics and medico-legal issues
- Information technology
- Life-long learning
- Reflective practice

Assessment tool

The PBCA should be based on assessment of the training portfolio maintained by the trainee during the period of post-MD training. The contents of the training portfolio should encompass all of the above learning outcomes and contain evidence of achievement of these outcomes by the trainee. Although some of these may have been evaluated before the MD examination, the training portfolio assessed at the PBCA should mainly contain evidence of achievements during post-MD training, either locally or overseas. All sections need not be of equal weight – for example, the section on Subject Expertise may be much more detailed than the others.

Contents of training portfolio

The contents of the training portfolio should be divided into sections according to the outcomes stated above, followed by a final section that contains evidence of reflective practice.

The following list sets out the type of evidence that may be relevant to each section. The details are to be determined by Board of study in Psychiatry.

1. Subject expertise:
 - Progress reports from supervisors on professionalism and skills, competencies and knowledge achieved in subspecialty
 - Supervisor feedback on communication skills
 - Log of procedures carried out and competence levels achieved
 - Results of work-place based assessments conducted
 - This section must include evidence that the trainee has acquired during the training including the essential knowledge, skills and competencies related to the subspecialty, identified by the trainer, and monitored with regular assessments throughout the period of post-MD training, e.g. extended cognitive assessments, Administration of clinical test batteries, Case-Based Discussions, Direct Observation of Practical Skills
2. Teaching and dissemination of knowledge
 - Undergraduates
 - Postgraduates
 - Ancillary health staff
 - Service users, families and carers
3. Research and Audit relevant to the subspecialty
 - Research report
 - Research papers published or accepted for publication
 - Abstracts of presentations
 - Clinical audit

4. Ethics and Medico-legal Issues
 - Completed Professionalism Observation Forms (from integrated learning component of Professionalism Strand)
 - Completed MSF during post-MD training
5. Information Technology
 - Participation in training programmes / workshops
 - Evidence of searching for information and application of findings in practice
6. Life-long learning
 - Participation in conferences and meetings
7. Reflective 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 achieved from this experience.

Training portfolio assessment

The training portfolio should be reviewed at least every 6 months by the trainer/supervisor, with regular feedback to the trainee on how the training may be improved. When the trainee is eligible for PBCA, three copies of the completed training portfolio should be submitted to the PGIM Examinations Branch.

The PBCA should take the form of a final, summative assessment carried out by two (2) independent examiners appointed by the Board of Study and approved by the Senate of the University of Colombo. The examination will be in the form of a desk review and an oral examination based on the training portfolio.

The overall assessment should be based on each of the main sections, which should be assessed using the format given in [Annexure 12](#). The candidate shall be required to make a presentation of 10 minutes to the Board of Study, on the post-MD training and future vision.

If the examiners are of the view that the trainee's performance is unacceptable, the examiners must provide written feedback on how the training portfolio should be improved in order to counsel the candidate. The trainee should then re-submit the training portfolio within three (3) months, and face another PBCA based on the re-submitted training portfolio. If the trainee is successful at this attempt, the date of Board Certification shall not be affected. If unsuccessful again, the date of Board Certification will be the date of passing the subsequent PBCA following further training for a period of six (6) months in a unit selected by the Board of Study.

ANNEXURE 5 - ANAESTHETIC LIST MANAGEMENT ASSESSMENT TOOL

Postgraduate Institute of Medicine – MD in Anaesthesiology with a Special Interest in Transplant Anaesthesia and Critical care

ANAESTHETIC LIST MANAGEMENT ASSESSMENT TOOL [ALMAT]

Please complete the question using a cross (x). Please use black ink and CAPITAL LETTERS

Trainee's surname	
Trainee's forename(s)	

Observed by		
Designation		
Date		
Signature of Observer		
Signature of Trainee		

Discussion of assessed clinical scenario.....
.....

What level of supervision does the trainee require for this list?

Supervisor in theatre ☐

Supervisor in theatre suite

Distant supervision ☐

What went well? *

.....
.....

What could have gone better? *

.....
.....

Plan for learning and development**

.....
.....

(Possible areas for feedback: * Time management, prioritization, style of management, clinical assessment, investigations and referrals ** e-Learning, simulation, courses, targeted clinical experience, journals)

Acknowledgement: The Royal College of Anaesthetists, UK

ANNEXURE 6 - DIRECT OBSERVATION OF PROCEDURAL SKILLS (DOPS) ASSESSMENT FORM

Postgraduate Institute of Medicine – MD in Anaesthesiology with a Special Interest in Transplant Anaesthesiology and Critical care

Direct Observation of Procedural Skills (DOPS) Assessment Form

Please complete the question using a cross (x). Please use black ink and CAPITAL LETTERS

Trainee's surname	
Trainee's forename(s)	

Observation	
-------------	--

Observed by	
Designation	
Date	
Signature of supervising	

Clinical Setting:.....

Assessment:

Practice was satisfactory	
Practice was unsatisfactory	
Formative assessment only *	
*If formative only, please give details of the areas covered in this assessment:	
Please tick the boxes on the reverse of this form to indicate any areas of performance you judged to be unsatisfactory or exemplary.	
Examples of good practice were:	
Areas of practice requiring improvement were:	
Further learning and experience should focus on:	
Date	
Signature of supervising doctor	

Clinical Setting:.....

Assessment:

Description	Excellent	Satisfactory	unsatisfactory	Comment
Aware of indications and contraindications for the procedure and possible alternatives				
Clear explanation of procedure and potential complications given to the patient using appropriate terminology				
Good knowledge and understanding of Anatomy, Physiology and imaging (if required) related to the procedure				
Thorough advance preparation for the procedure				
Communicated plan for procedure to relevant staff				
Aware of risks of cross-infection and effective aseptic technique during procedure was demonstrated				
Sought help appropriately				
Responded well to unexpected problems				
Skillful and handled patient and tissues gently				
Maintained accurate and legible records including descriptions of problems or difficulties				
Provided clear post-procedure instructions to patient and/or staff				
Demonstrated good non-technical skills				
Demonstrated reflective practice				
Consistently sought to work to the highest professional standards				

Acknowledgement: The Royal College of Anaesthetists, UK

ANNEXURE 7 - CLINICAL CASE DISCUSSION – CRITICAL CARE ASSESSMENT FORM

Postgraduate Institute of Medicine – MD in Anaesthesiology with a Special Interest in Transplant Anaesthesiology and Critical care

Clinical Case Discussion – Critical Care Assessment Form

Please complete the question using a cross (x). Please use black ink and CAPITAL LETTERS

Trainee's surname	
Trainee's forename(s)	

Description of case	
---------------------	--

Observed by		
Designation		
Date		

Clinical setting:

.....

Assessment:

Practice was satisfactory	
Practice was unsatisfactory	
Formative assessment only *	
*If formative only, please give details of the areas covered in this assessment:	
Please tick the boxes on the reverse of this form to indicate any areas of performance you judged to be unsatisfactory or exemplary.	
Examples of good practice were:	
Areas of practice requiring improvement were:	
Further learning and experience should focus on:	
Special focus of discussion:	

Description	Excellent	satisfactory	Unsatisfactory	Comment
Presentation of history and examination				
Assessment of clinical findings and results of investigations to arrive at differential diagnosis				
Appropriate and timely initial management and stabilization				
Appropriate further investigations and management				
Identification of potential problems				
Communications skills with patient, relatives, staff members				
Clinical record keeping				
Demonstrated good clinical judgement and an appropriate, systematic and coordinated approach to clinical care				
Demonstrated good understanding (appropriate to level of training) of focus of discussion chosen by assessor				

Acknowledgement: The Royal College of Anaesthetists, UK

ANNEXURE 8 - ANAESTHESIA CLINICAL PRACTICE ASSESSMENT FORM

Postgraduate Institute of Medicine – MD in Anaesthesiology with a Special Interest in Transplant Anaesthesiology and Critical care

Anaesthesia Clinical Practice Assessment Form

Please complete the question using a cross (x). Please use black ink and CAPITAL LETTERS

Trainee's surname	
Trainee's forename(s)	
Observation	
Observed by	
Designation	
Date	
Signature of supervisor	

Clinical Setting:Theatre ☐ICU ☐Other ☐**Assessment:**

Practice was satisfactory	
Practice was unsatisfactory	
Formative assessment only *	
*If formative only, please give details of the areas covered in this assessment:	
Please tick the boxes on the reverse of this form to indicate any areas of performance you judged to be unsatisfactory or exemplary.	
Examples of good practice were:	
Areas of practice requiring improvement were:	
Further learning and experience should focus on:	

Description	Excellent	Satisfactory	Unsatisfactory	Comments
Planning and Preparation				
Made a clear plan for the patients care				
Identified potential problems				

Considered available investigations and sought additional investigations where necessary				
Prepared necessary drugs and equipment				
Ensured appropriate assistance was available				
Clinical Decision Making				
Demonstrated a clear understanding of underlying principles of medical science and practice				
Commenced monitoring, observation and interventions appropriately				
Responded well to unexpected problems				
Reassessed and adapted plan in response to the patient's progress in a timely manner (immediacy and urgency)				
Safe Practice				
Understood and participated in WHO patient safety checklist when carried out				
Aware of and followed all appropriate standards, guidelines and protocols				
Followed procedures for avoiding healthcare associated infections				
Understood the need for and process of critical incident reporting				
Professional behaviour				
Communicated clearly and empathetically with patient				
Maintained confidentiality and protected patient dignity				
Team Work				
Conducted appropriate 2 way communication with team members				
Functioned as an effective team member				
Demonstrated leadership when required				
Technical Skills				
Demonstrated a systematic and coordinated approach to a clinical situation				
Demonstrated familiarity with all equipment utilized				

Demonstrated good manual dexterity and care when handling patient				
Non-technical skills and reflective practice				
Demonstrated good non-technical skills				
Demonstrated reflective practice				

Acknowledgement: The Royal College of Anaesthetists, UK

ANNEXURE 9 - CASE BASED DISCUSSION [CBD] ASSESSMENT FORM

Trainee's surname _____

Trainee's forename(s) _____

SLMC/GMC number (GMC NUMBER MUST BE COMPLETED) _____

IAC/IAOC Code _____

Observation _____

Observed by _____

SLMC/GMC number (SLMC/GMC NUMBER MUST BE COMPLETED) _____

Date (DD/MM/YYYY) □□/□□/□□□□

Signature of supervising doctor _____

Clinical setting:

Theatre ☐ ICU ☐ Other ☐

Special focus of discussion*	
What went well? **	
What could have gone better? **	
Plan for learning and development***	

Possible areas for feedback:

*	<i>Potential complications, Core Clinical Learning Outcomes</i>
**	<i>Planning, preparation, grasp of theoretical background, understood procedure and alternatives, plans and risks explained to patient, handling of patient, team communication, ability to cope with problems, mindful of cross infection, ability to evaluate own performance, maintenance of records, post-procedure instructions, professional standards</i>
***	<i>e-Learning, simulation, courses, targeted clinical experience, journals</i>

Acknowledgement: The Royal College of Anaesthetists, UK

ANNEXURE 10 - ASSESSMENT FORM FOR TRAINERS

**POSTGRADUATE INSTITUTE OF MEDICINE
BOARD OF STUDY IN ANAESTHESIOLOGY**

**POST MD TRAINING PROGRAMME IN ANAESTHESIOLOGY WITH A SPECIAL INTEREST IN
TRANSPLANT ANAESTHESIOLOGY AND CRITICAL CARE**

ASSESSMENT FORM FOR TRAINERS

Name of student :

Training center :

Period from :..... to: Consultant:

Please mark as appropriate – X		Significantly deficient	Below level of expected	Adequate performance	Above average	Outstanding performance	General comments
a) Clinical practice, teamwork & leadership							
i)	Ability to assess, analyze prioritize problems and formulate a sensible plan of management						
	Ability to effectively execute a plan of management						
	Ability to cope with emergencies and complications						
ii)	Decision making skills						
ii)	Communication, team work, organizational skills & leadership						
iii)	Effective utilization of clinical sessions						
	iv) Consideration of human factors and safety						
	v) Demonstrates reflective practice						
b) Education, Innovation & Management							
i)	Aware of recent developments and adopts them when appropriate						
	ii) Desire to improve clinical outcome and patient experience						
ii)	Active involvement in research & audit						
	iii) Demonstrates management skills required to achieve personal and institutional goals						

c) Skills						
i) Displays the range of skills appropriate to the level of training						
ii) Workplace based assessments						
d) Interpersonal skills, medico legal and ethical issues						
Rapport, empathy and sensitivity towards i. Patient and caregivers ii. Team members						
Awareness of medico-legal and ethical issues related to organ transplantation						

Details of workplace based assessments completed

.....

Does the trainee strive to achieve work-life balance?

.....

In your opinion has the trainees achieved the level of competence expected for the level of training?

.....

Signature of Supervisor :

Name of the Supervisor :

Date :

ANNEXURE 11 - REFLECTIVE PRACTICE GUIDELINE

Describe the management of the selected case with an emphasis on the following areas.

What problems did you observe?

What action did you take?

Justification for your actions.

What did you learn from this experience?

What is done differently in other clinical units: local and foreign?

What would you do differently next time?

What evidence influenced you to suggest these changes?

Has this experience highlighted any deficiencies in your training?

What learning needs did you identify from above?

Have you addressed these learning needs? If so how?

ANNEXURE 12 - MARKING SCHEME FOR THE PRE BOARD CERTIFICATION ASSESSMENT

The assessors will mark each of the seven sections of the training portfolio independently and on completion of the PBCA decide on a consensus mark for each section.

Assessment grading

A- Satisfactory

B- Unsatisfactory

In order to pass the PBCA all areas should be graded Satisfactory.

If the examiners are of the view that the trainee's performance is unsatisfactory, the examiners must provide written feedback on how the training portfolio should be improved in order to counsel the candidate. The trainee should then re-submit the training portfolio within three (3) months, and face another PBCA based on the re-submitted training portfolio. If the trainee is successful at this attempt, the date of Board Certification shall not be affected. If unsatisfactory again, the date of Board Certification will depend on the date of passing the subsequent PBCA following further training for a period of six (6) months in a unit selected by the Board of Study.

ANNEXURE 13 - RECOMMENDED READING MATERIALS

1. Oxford Textbook of Transplant Anaesthesia and Critical Care – Ernesto A.Pretto
2. Clinical data interpretation in Anaesthesia and Critical care – S.Bonner & C.Dodds
3. Anesthesia for Renal Transplantation (Developments in Critical care medicine and Anaesthesiology) – Graybar & Bready
4. Anaesthesia and Perioperative care for Organ Transplantation – Subramaniam & Sakai
5. Anesthesia and Transplantation. Sharpe & Gelb
6. Hepatology – Journal of the American Association for the Study of Liver Disease (AASLD)
7. Journal of Hepatology – Journal of the European association for the study of the liver
8. New England Journal of Medicine
9. Transplantation – Published by The Transplantation Society