

## **Sub-speciality Credentialing and Training in Paediatric Intensive Care**

### **Introduction**

Paediatric Intensive Care is multidisciplinary in nature crossing departmental and speciality lines inasmuch as the problems encountered in the critically ill patient encompasses different aspects of different specialities.

The paediatric intensivist is a specialist whose knowledge is of necessity broad involving all aspects of management of the critically ill child and whose base of operation is the ICU.

Over the years a number of important new modalities and therapies have been developed and a greater number is expected to emerge in the future creating new hopes for the patients and challenges the intensivists

The benefits of having intensivists run the ICUs providing coverage 24hrs a day i.e a closed system where the intensivists direct patient care with input from the relevant speciality is proven beyond doubt in many studies

### **Objective**

The objective of training is to produce paediatric intensivists who are specially qualified in the care of the critically ill child in totality managing a wide range of disorders such as cardiopulmonary disorders, brain injury, polytrauma, sepsis, multiorgan system failure, postoperative patients and organ transplantation.

#### **1. Entry criteria**

The candidate who wishes to pursue training in Paediatric Intensive Care in the Ministry of Health must have the following requirements:

a basic medical degree which is recognised by the Malaysian Medical council,

AND

a recognised postgraduate qualification in Paediatric Medicine which is registrable under the General Paediatrics Specialist register or

a recognised postgraduate qualification in Anaesthesiology which is registrable under the Anaesthesiology Specialist register

AND

At least 4 years experience in paediatric medical practice

#### **2. Duration of training programme ( total of 3 years )**

First year of training

6 months anaesthesiology ( for paediatricians ) or 6 months general paediatrics ( for anaesthesiologists)

3 months paediatric cardiac intensive care

3 months in neonatal intensive care

Second year of training

1 year in a gazetted local paediatric intensive care unit

Third year of training

1 year full time in an accredited paediatric intensive care unit overseas

### **3. Training contents and modalities**

#### **Necessary core skills and knowledge**

Specialty trainees in Paediatric Intensive Care , whether coming from a background in paediatrics, or anaesthesia will be expected by the end of their specialty training to be able to satisfy the Committee that they have gained training, experience and knowledge in a number of areas of clinical practice relevant to the care of critically ill children . These are detailed below. Much of the core training can most readily be acquired prior to entering a Paediatric Intensive Care programmes in posts ( preferably at Medical Officer level ) which include exposure to the relevant clinical disciplines eg Anaesthesiology, Neonatology:

Detailed understanding and experience will be required in the following

#### **General :**

1. Developmental physiology from birth to adolescence.
2. Understanding of the principles of developmental assessment.

#### **Resuscitation :**

3. Resuscitation and management of critically ill children from birth to adolescence to include a detailed knowledge and practical experience of the care management of children with impairment of each of the major organ systems (e.g. cardiac, respiratory, renal, haematological, metabolic; neurological and infection problems.
4. Resuscitation and management of patients with multiple trauma, particularly head, chest and abdominal injuries.
5. Recognition and where possible management of different types and degree of burns, smoke inhalation and airway burns.
6. Management of massive/rapid blood loss.
7. Management of infection and septic shock.

#### **Respiratory and cardiac:**

8. The physiology, practicalities and limitations of available techniques of assisted ventilation and their application, including the use of nitric oxide, high frequency ventilation and recruitment techniques.
9. Indications for and principles of management of extracorporeal membrane oxygenation and other cardiac assist devices.

#### **Neurology**

10. Assessment, management and prognosis of brain injury.

### **Intravenous fluid therapy and nutrition:**

11. Clear and comprehensive understanding of fluid and electrolyte balance.
12. Understanding and familiarity with the principles of intravenous nutrition.
13. Understanding of nutritional and metabolic effects of surgery and trauma.
14. Enteral nutrition in the critically ill child.

### **Pharmacology :**

15. Pharmacology of drugs, including anaesthetic drugs, inotropes and vaso-active drugs used in paediatric intensive care.
16. Techniques of pain relief and sedation.
17. Management of drug overdose and ingestion of other toxic substances.
18. Therapeutic drug monitoring.

### **Patient monitoring :**

19. Techniques of invasive and non-invasive monitoring.
20. Principles of operation of intensive care equipment and of clinical measurement techniques, together with an understanding of their limitations.
21. Appropriate use and interpretation of investigations (e.g. radiology, ultrasound, laboratory medicine).

### **Psychological, legal and ethical aspects of intensive care:**

22. Communicating with patients, families and staff.
23. The role of parents in care and decision making.
24. Bereavement care.
25. Diagnosis and management of brain stem death.
26. Principles of organ donation and care of the donor.
27. The wider aspects of care of the child after non-accidental injury.

### **Transport of the critically ill child:**

28. Stabilization of the critically ill neonate, infant and child for transport.
29. Use of portable monitoring equipment.
30. Emergency procedures during transport.
31. Audit of transport.

**Certain specific practical skills will be necessary including :**

32. Advanced paediatric trauma and cardiac life support.
33. Management of children with acute upper airway obstruction.
34. Intubation and care of the airway of the intubated and unconscious patient (including techniques for difficult intubation and long term airway management.
35. Managing the emergency surgical airway.
36. Percutaneous vascular access techniques, with particular references to central line placement and arterial cannulation.
37. Intraosseous infusion techniques.
38. Insertion of chest drain and aspiration of pleural effusions.
39. Insertion of lines for dialysis and haemofiltration.
40. Aspiration of pericardial effusions.

Certain additional skills (e.g. insertion of intracranial pressure monitoring devices, emergency tracheotomy and bronchoscopy) are valuable, but are unlikely to be acquired by the majority of trainees.

**Organizational Skills**

Trainees should also gain experience in the organization and managerial skills necessary for the running of a paediatric intensive care unit and be actively involved in staff training and their development

**Audit and Clinical Research**

Involvement in clinical audit throughout postgraduate training is essential. The candidate should be actively involved in the development of audit criteria within paediatric intensive care, and be thoroughly familiar with the use of illness of severity scores and risk scores.

**Review and Evaluation of Progress of Training**

Log Book on training and professional development provided by the committee

Quarterly assessment and yearly documentation of performance by supervisors in accordance with the format provided

An exit interview conducted by the Paediatric Intensive Care Subspecialty Committee when deemed necessary

#### **4. Training Centres and Trainers/Supervisors**

##### **Criteria for recognition of PICUs for training**

A Paediatric Intensive Care Unit is a specialized facility designed, equipped and staffed, exclusively for the management and treatment of critically ill children ranging from infancy to adolescence

Only hospitals with designated PICU can be considered for training in paediatric intensive care. A suitable training programme should be submitted for approval by the committee.

There should be a suitable case mix and patient throughput to provide a comprehensive experience in paediatric intensive care

This should be undertaken in a minimum of 8 bedded PICU and managing at least 200 intubated patients per year. (This number may include patients given non invasive ventilations )

A consultant experienced in intensive care should be available during working hours and to provide coverage during out of office hours

A balance of expertise is encouraged there being anaesthetist and paediatricians..

A good retrieval system should be provided within the region covered by the PICU.

#### **5. Paediatric Intensive Care Subspecialty Committee**

The committee shall be made up of the following members who will make decision on the training programme, the criteria for accreditation and the suitability of candidates to be accredited as paediatric intensivists. It shall consist of representations of paediatric intensivists from the Ministry of Health, Universities and relevant bodies.

Membership to the Committee will be by appointment of the Chairperson of the National Credentialing Committee upon the recommendation of the College of Paediatrics of the Academy of Medicine of Malaysia. The term shall be 2 years at the end of which committee members are eligible for reappointment

## 6. Criteria for accreditation of Paediatric Intensivist in Malaysia

1. Any doctor can request to be registered if he/she fulfils ALL of the following requirements:
    - i) A recognised basic medical degree recognized by the Malaysian Medical Council
    - ii) A recognised postgraduate qualification. One of the following paediatric postgraduate degrees recognised by the Malaysian Paediatric Specialty Board
      - Master of Paediatrics awarded by Universiti Malaya, Universiti Kebangsaan Malaysia or Universiti Sains Malaysia
      - MRCP(UK) up to year 2000
      - MRCPCH by the Royal College of Child Health UK
      - MRCPI
      - FRACP
      - M.Med in Paediatrics ( Singapore )
      - Any other equivalent paediatric postgraduate degrees recognised by the Malaysian Paediatric Specialty Board on a case by case basis
  2. Completed postgraduate training in Paediatric Intensive Care in recognised training centres
    - Completion of a minimum of 3 years in Paediatric Intensive Care both locally and overseas which fulfilled the criteria stipulated by the Paediatric Intensive Care Subspecialty Committee, under the supervision of Paediatric Intensivist trainers who fulfilled the criteria stipulated under the Paediatric Intensive Care Subspecialty Committee.
    - This period of training does not include the time the applicant spent during her housemanship nor the period when undergoing training for the basic paediatric postgraduate degrees
    - The candidate must furnish evidence of satisfactory completion of Paediatric Intensive Care subspecialty training such as:
      - Log book of core procedures and patients seen
      - Portfolio with supporting document where relevant eg a valid certificate of completion of training, published research papers or abstracts, certificates of attendances at workshops, courses
      - Satisfactory supervisors reports on Paediatric Intensive Care clinical core competency
- The above criteria would be reviewed from time to time.
3. Grandmother Clause

Senior paediatricians may be credentialed without the need to submit log books and supervisor's report if they fulfil the following criteria

- 3.1 has been gazetted as a paediatric intensivist by the Ministry of Health, or registered as a paediatric intensivist under the Specialist Register of the Academy of Medicine of Malaysia or appointed as a Professor of Paediatrics (Paediatric Intensive Care) by the university before 1 June 2006  
Or
- 3.2 has reports from 2 paediatric intensivists on his/her clinical competency in paediatric intensive care  
AND
- 3.3 five years or more of working experience in the field of paediatric intensive care and spends at least 70% of his practice in this speciality before 23<sup>rd</sup> September 2009.

#### Note

For any doctor with training and working experience as a paediatric intensivist overseas, his case may be considered on a case by case basis. A curriculum vitae and supporting documents with recommendations from 2 paediatric intensivists will be required.

He should also complete at least one period of not less than six months under a supervisor in a accredited Malaysian Hospital followed by a satisfactory report from the appointed supervisor

#### **List of accredited trainers**

There are at present only three accredited trainers with one each in UKM and UMMC and 1 in the Ministry of Health.

Dato' Dr Teh Keng Hwang  
Professor Dr Lucy Lum Chai See  
Associate Professor Dr Tang Swee Fong

#### **List of accredited training centers**

The centres currently accredited to be training centres would be Hospital Sultanah Bahiyah, Alor Setar, Institut Paediatrics, UMMC and UKM. Centres will be added when the criteria is fulfilled.

#### **Trainee Commitments**

The Trainee should discuss the training requirements with the supervisor and a timetable and programme drawn up. The programme should cover the areas specified in the section on core content. The trainee should attend ward rounds, case conferences, radiological conferences, mortality and morbidity conferences, journal clubs. He is expected to carry out a research proposal.

**Core Procedural Skills of Subspecialists on Completion of Fellowship/Subspecialty Training**

**Name of Subspecialty : Pediatric Intensive Care**

| No | Procedures  | Minimal training necessary for competence   | Maintenance of competence                    | Please indicate ( ) the procedures that a generalist can perform with the required minimum training | Minimal training necessary for a generalist to perform the procedure competently             |
|----|---|---|--|---|--|
| 1. | High Frequency Oscillation                                      | Working as a specialist for 6 months in a tertiary centre where HFOV has been used on at least 12 patients, | Ventilating at least 12 cases a year on HFOV |   |  |
| 2. | Use of Nitric Oxide in newborn and pediatric patient            | Working as a specialist for 6 months in a tertiary centre and has used NO therapy in at least 6 patients    | Using NO in at least 6 patients a year       |   |  |
| 3. | Conventional Mechanical ventilation of the critically ill child | Working as a specialist for 6 months in a unit which ventilates at least 200 patients per year              | Ventilating at least 200 patients a year     | √   | Working as a specialist for 6 months in a unit which ventilates at least 50 new cases a year |
| 4  | Central venous catheter   | Working as a specialist for 6 months in an  | Inserting at least 12                        |   | Working as a specialist for 6 months in an   |

|    |   |   |   |   |  |
|----|---|---|---|---|--|
|    | cannulation   | PICU and has performed at least 12 CVCs of which at least 2 internal jugular                              | CVCs a year   | √ | PICU and has performed at least 6 CVCs   |
| 5  | Peritoneal dialysis or Continuous veno hemofiltration | Working as a specialist in a PICU for 6 months and has done at least 4 dialysis per year and 2 CVVH       | Insert at least 4 peritoneal catheters or perform 2 CVVH per year |   |  |
| 6  | Noninvasive ventilation                               | Working as a specialist in a PICU for 6 months and has done at least 10 noninvasive ventilations per year | Instituted at least 10 noninvasive ventilation                    |   |  |
| 7  | Basic echocardiography                                | 20 echocardiographic examinations   |   | √ |  |
| 8  | Insertion of chest tube                               | Minimum successful procedures – 10  |   | √ |  |
| 9  | Bronchoscopy  | Observed or carried out at least 6 bronchoscopy   |   |   |  |
| 10 | Intubation  | Successful intubations (rapid sequence intubation) in at least 50 patients                                |   | √ | Working as a specialist for 6 months in a unit which ventilates at least 50 new cases a year |

## Appendix A

### Checklist and criteria for accreditation of centre for Paediatric Intensive Care

#### A, Paediatric Intensive Care work load and services

1. Number of ventilated cases per year \_\_\_\_\_ per year
2. Number of patients on High frequency oscillations \_\_\_\_\_ per year
3. Provides care and laboratory services Yes ( ) No ( )
4. Provides non invasive ventilation Yes ( ) No ( )

#### B Training facilities for Paediatric Intensive Care

1. Total number of accredited paediatric intensivists in the hospital \_\_\_\_\_
2. Meeting room with audiovisual aids Yes ( ) No ( )
3. A medical library on site Yes ( ) No ( )
4. Access to Medline and literature search Yes ( ) No ( )

#### C. Educational activities in paediatric intensive care

(Please furnish a copy of weekly or monthly teaching activities )

1. Number of teaching ward rounds with paediatric intensivist/week \_\_\_\_\_
2. Number of hours / week of rostered paediatric intensive education \_\_\_\_\_
3. Applicant was able to attend at least 70% of the educational opportunities  
Yes ( ) No ( )
- 4, number of conferences and workshops attended per year \_\_\_\_\_
5. Applicant has at least 6 on call duties in the PICU Yes ( ) No ( )

#### D, Clinical cases see log book

E. A supervisor for training of paediatric intensivist is one who has fulfilled the following criteria

1. appointed as a paediatric intensivist for at least 2 years
2. works in a accredited training centre
3. appointed as a supervisor by the Paediatric Intensive Care subspecialty committee

**Appendix B**

**Report on the level of achievement of Paediatric Intensive Care key competencies by supervisors /referees**

(Each supervisor/referee must submit a separate report)

Candidates Name: \_\_\_\_\_

Candidates Identification Number

Period of training from \_\_\_\_\_ to \_\_\_\_\_

Placement 1 \_\_\_\_\_ Dates from \_\_\_\_\_ to \_\_\_\_\_

2 \_\_\_\_\_ Dates from \_\_\_\_\_ to \_\_\_\_\_

3 \_\_\_\_\_ Dates from \_\_\_\_\_ to \_\_\_\_\_

4 \_\_\_\_\_ Dates from \_\_\_\_\_ to \_\_\_\_\_

Supervisor 1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

Report

I hereby certified that the above information is true and accurate

Signature of supervisor: \_\_\_\_\_

Date or Report \_\_\_\_\_

## Log Book

The trainee will be assessed in the following :

- a) Practical procedures and skills, and organ system support
- b) Patient management: assessment, investigation, monitoring and diagnosis  
compassionate family orientated care
- c) Transport and stabilization
- d) Cardiopulmonary resuscitation skills (PALS certification )
- e) Communication skills and Attitudes

In these assessments the trainee will be expected to support the demonstration of clinical skills with knowledge of the relevant areas as described in the core curriculum. This will include the establishment of a safe environment for critically ill patients inside and outside the PICU, relief of patient suffering with judicious use of sedation and appropriate drugs. The trainee should develop management plans and modify them accordingly to patient outcome.

### a) Practical procedures and skills, and organ system support

Name of trainee: \_\_\_\_\_

The trainee:

|   | Yes                      | No                       | Comments             |
|---|--------------------------|--------------------------|----------------------|
| Plans procedures, and prepares working environment appropriately      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Ability to use vasoactive drugs and fluids appropriately              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Performs aseptic insertion of tunneled iv feeding catheters           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Performs insertion of chest tube safely and aseptically               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Performs tracheal intubation of a patient in PICU                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Establishes a critically ill patient on mechanical ventilation        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Prescribes hypnotics, analgesics and neuromuscular blockers safely    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Manages fluid balance in patients receiving renal replacement therapy | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Uses suitable antimicrobial regimes for pneumonia and septic shock    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| This assessment was completed satisfactorily                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| If NO give reasons  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |

Signature of trainer

Name

Date

**b) Patient management: assessment, investigation, monitoring and diagnosis, compassionate family oriented care**

Name of trainee: \_\_\_\_\_

| The trainee:   | Yes                      | No                       | Comments             |
|--|--------------------------|--------------------------|----------------------|
| Ensures physiological safety as a priority                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Is able to elicit relevant history from available sources          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Able to conduct an effective physical examination                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Requests and carries out relevant clinical investigations          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Discusses and evaluates differential diagnosis                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Discusses appropriate management strategies                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Evaluates patients responses and modifies treatment as appropriate | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Interprets Xrays and Arterial blood gas correctly                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Ensures effective information transfer between on call staff       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Understands and implements infection control practices             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Knows limitations and when to seek senior help                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Is caring and responsible towards patient                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| This assessment was completed satisfactorily                       | <input type="checkbox"/> | <input type="checkbox"/> |                      |
| If NO give reasons   |                          |                          |                      |

Signature of trainer

Name

Date

**c) Assessment of cardiopulmonary resuscitation**

Name of trainee: \_\_\_\_\_

| The trainee:   | Yes                      | No                       | Comments             |
|--|--------------------------|--------------------------|----------------------|
| Demonstrates bag and mask ventilation                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Demonstrates satisfactory intubation and Positive pressure ventilation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Demonstrate cardiac compression and coordination with bag mask         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Interprets cardiac arrhythmias on ECG monitor                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |

Knows indications for defibrillation

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Demonstrates correct use of defibrillator

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Knows the use of appropriate use of drugs during resuscitation

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Takes a lead role during CPR

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Ensures correct recording of CPR drugs and events

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

This assessment was completed satisfactorily

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

If NO give reasons

Signature of trainer

Name

Date

**d) Audit, Research**

Name of trainee: \_\_\_\_\_

The trainee:

Yes No Comments

Able to supervise junior colleague in procedures

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Presents a topic discussion at the departmental meeting

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Carry out an audit project

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Participates in PICU data collection

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

This assessment was completed satisfactorily

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

**If No give reasons**

**e) Admission, discharge, follow up and end of life care**

Name of trainee: \_\_\_\_\_

The trainee:

Yes No Comments

Understands appropriateness of admissions to PICU

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Assesses factors influencing discharge from PICU  
Ensures adequate information transfer before discharge

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Follow up patient in ward after discharge

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Discusses factors influencing treatment intensity decisions

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Shows sensitivity in discussions with patient and family

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Supports colleagues in implementing limitation/withdrawal

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Supports family during limitation/withdrawal

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Performs brain stem death tests

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Describes principles of obtaining consent to donation

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Liaison with the transplant coordinator

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

This assessment was completed satisfactorily

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

If No give reasons

Signed

Name

Date

**f) Special circumstances**

Name of trainee: \_\_\_\_\_

The trainee:

Yes No Comments

Demonstrate ventilatory strategies of ARDS/ALI

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Demonstrates cardiovascular management of sepsis/shock

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Describes principles of infection control in paediatric intensive care

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Stabilises a patient following elective cardiopulmonary bypass

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Discusses complications occurring within 24 hours of cardiac surgery

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Stabilises a patient following elective craniotomy

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Discusses management of acute intracranial hypertension

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Performs the primary and secondary survey of a trauma patient

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Interprets results of Arterial blood gas correctly

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Discusses stabilization, transfer of patient with fulminant liver failure

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Discusses principles of management of immunocompromised patient

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

This assessment was completed satisfactorily

|                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  |
|--------------------------|--------------------------|--|

Signed

Name

Date

**g) Assessment of communication skills, attitudes and behaviour**

Please tick the appropriate box. This form should be filled once a year or when the trainee leaves the hospital or module

| Attitude or behaviour                            | Satisfactory | Cause for concern | Examples ( please give date) | Initials of Assessors ( dates) |
|--|--------------|-------------------|------------------------------|--------------------------------|
| Communication skills ( with parents & relatives) |              |                   |                              |                                |
| Communication skills ( with staff)               |              |                   |                              |                                |
| Reliability                                      |              |                   |                              |                                |
| Punctuality                                      |              |                   |                              |                                |
| Control of moods                                 |              |                   |                              |                                |
| Personal presentation                            |              |                   |                              |                                |
| Social behaviour                                 |              |                   |                              |                                |
| Conscientiousness                                |              |                   |                              |                                |
| Initiative                                       |              |                   |                              |                                |
| Assertiveness                                    |              |                   |                              |                                |

|                          |  |  |  |  |
|--------------------------|--|--|--|--|
| Confidence               |  |  |  |  |
| Departmental involvement |  |  |  |  |
| Team work                |  |  |  |  |
| Honesty                  |  |  |  |  |
| Record keeping           |  |  |  |  |

**Documentation of competence in the complementary specialties ( Anaesthesia etc ) at Medical Officer level.**

The training may be undertaken in different hospitals and hence competency must be documented carefully. The assessments should include all the items listed and signed by the relevant assessors.

The purpose of this speciality training in general anaesthesia is to gain proficiency in the use of anaesthetic agents' sedative drugs and endotracheal intubation. This knowledge, training and experience will be further enhanced during the 1 year PICU training. The trainees will be able to intubate children of all ages who required PIC, manage the difficult airway and use inhalational agents and will know when to call assistance from their anaesthetic colleagues.

The trainee will be assessed in the following areas:

- a) Preoperative assessments
- b) General anaesthesia for ASA I or II patients including equipment and anaesthetic machine check.)
- c) Rapid sequence induction.
- d) CPR skills
- e) Knowledge of basic sciences, physiology, pharmacology
- f) Behaviour of gases, breathing systems and equipments used in anaesthesia and intensive care
- g) Communication skills, clinical judgement, attitudes and behaviour.
- h) Confirmation of satisfactory completion of training in anaesthetic module

No trainee can deliver anaesthesia initially without immediate supervision. After a satisfactory performance as assessed the trainees can then undertake cases delegated to them and be given increased clinical responsibility by working on call with local or distant supervision.

**i) Assessment of Pre –operative assessment of patients**

Name of trainee: \_\_\_\_\_

| The trainee:  | Yes                      | No                       |
|---|--------------------------|--------------------------|
| Communicates satisfactorily with patients/parents               | <input type="checkbox"/> | <input type="checkbox"/> |
| Obtains relevant history and physical examination               | <input type="checkbox"/> | <input type="checkbox"/> |
| Assesses the airway   | <input type="checkbox"/> | <input type="checkbox"/> |
| Understands the preoperative Investigations                     | <input type="checkbox"/> | <input type="checkbox"/> |
| Explains the anaesthesia clearly                                | <input type="checkbox"/> | <input type="checkbox"/> |
| Discusses pain and explains the postoperative analgesia clearly | <input type="checkbox"/> | <input type="checkbox"/> |
| Prescribes preoperative medication as needed                    | <input type="checkbox"/> | <input type="checkbox"/> |
| Understands the ASA classification                              | <input type="checkbox"/> | <input type="checkbox"/> |
| This assessment was completed satisfactorily                    | <input type="checkbox"/> | <input type="checkbox"/> |

If NO give reasons

Signed .....

Name .....

Date .....

**ii) Assessment of the ability to administer a general anaesthetic competently to elective ASA 1 or 11 patients**

Name of trainee: \_\_\_\_\_

| The trainee:   | Yes                      | No                       |
|--|--------------------------|--------------------------|
| Properly prepares the anaesthetic room and operating theatre | <input type="checkbox"/> | <input type="checkbox"/> |
| Conducts a preoperative equipment check satisfactorily       | <input type="checkbox"/> | <input type="checkbox"/> |
| Has properly prepared patient for surgery                    | <input type="checkbox"/> | <input type="checkbox"/> |
| Choose an appropriate anaesthetic technique                  | <input type="checkbox"/> | <input type="checkbox"/> |
| Establishes IV access  | <input type="checkbox"/> | <input type="checkbox"/> |
| Establishes ECG and pulse oximetry in the anaesthetic room   | <input type="checkbox"/> | <input type="checkbox"/> |

|   |                          |                          |
|---|--------------------------|--------------------------|
| Measures BP prior to induction                    | <input type="checkbox"/> | <input type="checkbox"/> |
| Preoxygenate as necessary                         | <input type="checkbox"/> | <input type="checkbox"/> |
| Induces anaesthesia satisfactorily                | <input type="checkbox"/> | <input type="checkbox"/> |
| Manages airway competently I) Face mask           | <input type="checkbox"/> | <input type="checkbox"/> |
| II) LMA   | <input type="checkbox"/> | <input type="checkbox"/> |
| Maintains and monitors anaesthesia satisfactorily | <input type="checkbox"/> | <input type="checkbox"/> |
| Conducts emergence and recovery safely            | <input type="checkbox"/> | <input type="checkbox"/> |
| Good record keeping                               | <input type="checkbox"/> | <input type="checkbox"/> |
| Prescribes analgesia appropriately                | <input type="checkbox"/> | <input type="checkbox"/> |
| This assessment was completed satisfactorily      | <input type="checkbox"/> | <input type="checkbox"/> |
| If NO give reasons                                | <input type="checkbox"/> | <input type="checkbox"/> |

Signed

Name

Date

**iii) Assessment of anesthesia with Endotracheal intubation**

Name of trainee: \_\_\_\_\_

The trainee:

|  | Yes                      | No                       |
|--|--------------------------|--------------------------|
| Assesses the airway properly                   | <input type="checkbox"/> | <input type="checkbox"/> |
| Understands factors of a difficult airway      | <input type="checkbox"/> | <input type="checkbox"/> |
| Satisfactory use of a laryngoscope             | <input type="checkbox"/> | <input type="checkbox"/> |
| Correct placement of the endotracheal tube     | <input type="checkbox"/> | <input type="checkbox"/> |
| Demonstrates correct placement by auscultation | <input type="checkbox"/> | <input type="checkbox"/> |
| observation                                    | <input type="checkbox"/> | <input type="checkbox"/> |
| capnography                                    | <input type="checkbox"/> | <input type="checkbox"/> |
| This assessment was completed satisfactorily   | <input type="checkbox"/> | <input type="checkbox"/> |
| If NO give reasons                             | <input type="checkbox"/> | <input type="checkbox"/> |

Signed

Name

Date

**iv) Assessment of Rapid Sequence Intubation (RSI)**

Name of trainee: \_\_\_\_\_

| The trainee must demonstrate:   | Yes                      | No                       |
|---|--------------------------|--------------------------|
| Preparation of the anaesthetic room and operating theatre                             | <input type="checkbox"/> | <input type="checkbox"/> |
| Satisfactorily checking the anaesthetic machine, sucker etc<br>Preparation of patient | <input type="checkbox"/> | <input type="checkbox"/> |
| Understands mandatory period for preoperative fasting                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| Understands the indication for RSI  | <input type="checkbox"/> | <input type="checkbox"/> |
| An adequate explanation of RSI to patient including the cricoid pressure              | <input type="checkbox"/> | <input type="checkbox"/> |
| To the assistant how to apply cricoid pressure  | <input type="checkbox"/> | <input type="checkbox"/> |
| Proper pre oxygenation of the patient   | <input type="checkbox"/> | <input type="checkbox"/> |
| Undertaking of the RSI  | <input type="checkbox"/> | <input type="checkbox"/> |
| Correct placement of the tube   | <input type="checkbox"/> | <input type="checkbox"/> |
| This assessment was completed satisfactorily  | <input type="checkbox"/> | <input type="checkbox"/> |
| If No give reasons  | <input type="checkbox"/> | <input type="checkbox"/> |

Signed

Name

Date

Confirmation of satisfactory completion of 6 months module in anaesthesia

Name of trainee

Period of training ( dates and place)

Signature of assessor

Name

Date