MASTER OF PAEDIATRICS (UM)
DOCTOR OF PAEDIATRICS (UKM)
MASTER OF MEDICINE (PAEDIATRICS) USM
MASTER OF MEDICINE (PAEDIATRICS) UPM
MASTER OF MEDICINE (PAEDIATRICS) UITM

MANUAL FOR CANDIDATES

REVISED VERSION 3 (10th Jan 2022)

SESSION 2025/ 2029

TABLE OF CONTENTS

Objectives

The philosophy of our postgraduate programme is to provide **training by apprenticeship** and learning from patients with emphasis on self-directed learning.

The objectives of the postgraduate programme are:-

1. To assist and guide trainees to acquire adequate knowledge in Paediatrics.

2. To ensure that the trainees acquire the required clinical skills and are able to function independently as competent general paediatricians at the end of the programme.

3. To provide opportunities and ensure that the trainees acquire the knowledge and skills in the management of acute paediatric and neonatal emergencies.

4. To train and provide opportunities for the trainees to acquire and improve communication skills with patients, families, colleagues and other allied health professionals as well as in academic presentations and at medical meetings.

5. Developing trainees who are able to evaluate and make decisions in clinical situations even with limited resources taking into consideration social and ethical issues.

6. To train the trainees to acquire the knowledge and skills of conducting clinical research.

7. To inculcate proper professional attitudes towards their work, their patients and families, and colleagues at work.

8. To train candidates in leadership and management skills

Entry Requirements

1. **Entry Requirements:**

For Malaysian trainees, the requirements for admission as a candidate for the programmeare as follows:

1. MMC registration certificate
2. Completion of house-officer training certificate
3. A certified report showing proof of completion of 4 months of paediatric posting as a House-officer or medical officer
4. Documentation of successful completion of ALL required Paediatric Entrustable Professional Activities/ Essential Learning Activities -EPAs/ELAs (please refer to MOH website – Pembangunan Kerjaya Pegawai Perubatan)
5. Evidence of passing the Malaysian Paediatric Entrance Examination (MEDEX) OR MRCPCH part 1b OR 2a within the last 5 years prior to application

For international trainees, the requirements for admission as a candidate for the programme are as follows:

1. MMC registration certificate (Temporary Practicing Certificate)
2. Documentation of housemanship training or its equivalent
3. Evidence of English language proficiency (IELTS 7 or equivalent)
4. A certified report showing proof of completion of 4 months of paediatric posting as a House-officer or medical officer
5. Documentation of successful completion of ALL required Paediatric Entrustable Professional Activities/ Essential Learning Activities -EPAs/ELAs (please refer to MOH website – Pembangunan Kerjaya Pegawai Perubatan)
6. Evidence of passing the Malaysian Paediatric Entrance Examination (MEDEX) OR MRCPCH part 1b OR 2a within the last 5 years prior to application

Duration of Study

1. The duration of study will be four (4) full years as a full time student.

2. The maximum duration of study shall not exceed seven (7) years.

STRUCTURE OF THE MASTER OF MEDICINE (PAEDIATRICS) PROGRAMME

Year 1	• Rotations in General Paediatrics • Neonatology •
Year2 & 3	• General Paediatrics / Subspecialty Rotation • Initial preparation of Research Project
Year 4	• Function as a registrar/ junior specialist in General Paediatrics and Neonatology • Subspecialty rotation / Elective • Continuation of Research Project • Presentation and submission of Research Project

The course comprises of a programme of advanced study and training under supervision over a period of not less than four years, divided into:

Year 1

Year 1 comprises the study of basic medical sciences, general paediatrics, child health and nutrition, neonatal care and acquisition of basic clinical skills in paediatrics. During the first year, students are also expected to familiarize themselves with the diagnosis and management of common paediatric conditions. Candidates will undergo clinical clerkships under supervision. Candidates should use the syllabus guide provided in the manual for self-study.

Candidates must **have** attend**ed** the Neonatal Resuscitation Programme (NRP)

Year 2 and 3

The 2nd and 3rd year comprises of training in different disciplines of Paediatrics which includes General Paediatrics, Developmental Paediatrics, Paediatric Intensive Care, Community Paediatrics, Respiratory, Gastroenterology & Hepatology, Cardiology, Haematology and Oncology, Immunology and Infectious Diseases, Metabolic Diseases, Endocrinology, Genetics, Neurology, Nephrology, Neonatology and Adolescent Paediatrics. The general objective is to enable students to acquire knowledge, skills and attitudes appropriate for the management of patients in the various paediatric disciplines which will be useful in their general paediatric practice.

The candidate is also required to do a research project, starting with literature search, followed by the study proposal, application for appropriate funding, getting ethical committee approval and reporting on the progress of the project to the supervisor and final presentation to the department at the scheduled time.

Year 4

Year 4 consists of further advanced training in paediatrics. The trainee who has passed the Part II Examination and completed 3 years of clinical training is expected to function more independently under the supervision of the lecturer/consultant.

Within 4 years of enrollment, the candidate has to :

1. Be a Paediatric Advanced Life Support (PALS) or Advanced Paediatric Life Support (APLS) provider
2. Be a NRP provider
3. Attend a Basic Statistics and research methodology course (organized by the respective universities)

Within 4 years of enrollment, the candidate is recommended to attend the following courses:

1. Communication
2. Bioethics
3. Scientific writing
4. Attend a Good Clinical Practice course (organized by the respective university or Clinical Research Centre [CRC] Malaysia)

SUPERVISION AND ROLE OF THE SUPERVISOR

Supervision is the dynamic process in which the supervisor encourages and participates in the development and training of the candidate. Supervision is fundamental to the educational process and is imperative in the open learning programme.

The two major roles of supervision are:

1. Objective evaluation of candidate's performance using appropriate methods of assessment, and
2. Establishing a relationship that will help the candidate to be independent learners and highly motivated individuals.

Supervisors

Educational Supervisor

Educational supervisors will supervise the candidate through the course until graduation. These are lecturers from the Department of Paediatrics of the respective university and specialists from the Ministry of Health.

The educational supervisor is expected to:

- be a mentor/academic advisor to the candidate in matters pertaining to academic performance
- be a liaison officer between the candidate, the HOD and clinical supervisors
- advise the candidate regarding career development
- participate in programme evaluation
- help the candidate plan and complete the dissertation
- encourage and assist the candidate to write papers and attend seminars/conferences
- monitor completion of formative assessments

Clinical Supervisor

A clinical supervisor is a paediatrician whom the candidate is working with during the 3-monthly clinical rotations. The clinical supervisor plays a major role in the supervision of the candidate's clinical training. The clinical supervisor is expected to:

- evaluate the candidate using the overall supervisor's report (OSR)
- supervise the candidate's clinical work
- ensure that the candidate keeps up with the literature, attends hospital teaching activities (e.g. CPC) and maintains a professional attitude toward patients
- conduct formative assessments

Candidates are expected to approach their supervisors for their respective assessments

ASSESSMENT AND EXAMINATIONS

1. FORMATIVE ASSESSMENT

Candidates must keep a portfolio as evidence of their formative assessment. All documentation of the formative assessment **MUST BE** submitted to the respective university **every 3 months**, within 1 month after completion of the rotation. Candidates failing to submit the formative assessments within the allocated time, will not be eligible to sit for exams including the thesis Viva exam and/or graduate from the programme.

1.1 Overall Supervisor's report (OSR)

OSR is a report detailing or appraising the candidate's performance throughout each clinical posting. It should be filled out by the respective clinical supervisor or any specialist/consultant within the same team. Candidate must obtain a minimum of satisfactory grade in the overall clinical competency.

OSR must be submitted every 3 months and candidates are expected to get feedback from the clinical supervisor on their performance.
Appendix 2: Format for overall supervisor's report

1.2 Case-based Discussions (CbD)

The assessment is candidate-driven. **A case-based discussion is done at least once every 3-month posting.** The candidate must submit at least one satisfactory CbD per posting.
Appendix 3: Format for Case-based Discussions

1.3 Mini Clinical Evaluation Exercise (Mini CEX)

The assessment is candidate-driven. **A Mini CEX is done at least once every 3-month posting.** The candidate must submit at least one satisfactory Mini CEX per posting.
Appendix 4: Format for Mini CEX

1.4 Directly Observed Procedural Skills (DOPS)

DOPS are instrument to assess competence in practical procedures. **It should be assessed by the respective clinical supervisor**. Please refer to Appendix 5 for the DOPS list.
Appendix 5: Format for DOPS

1.5 Sheffield Instrument for Letters (SAIL)

SAIL is an assessment method to review quality of letter writing of each candidate. The candidate are encouraged to **submit one SAIL** every 3 months.
Appendix 6: Format for SAIL

1.6 **Multisource feedback:** Multisource Feedback (MsF) is a 360-degree evaluation which is a questionnaire based assessment from medical staff including consultants, specialists, peers and nursing staff. Every year, the trainee should have 1 MsF evaluation from 3 medical staff and 2 nursing staff. The assessments are CONFIDENTIAL and evaluators need to submit the forms directly to the Paediatric secretary in UM or their University supervisor.

1.7 *Appendix 7: Format for MsF*

1.8 **Safe guarding:** Safeguarding children CbD – This is a case-based discussion designed to assess knowledge in the assessment and management of children at risk.
Appendix 8: Format for CbD

1.9 **Research project proposal**

Candidates have to prepare and present their research proposal to the department. The research proposal should be approved by the department before submission to the institutional research and ethics committee. Approval may be required at both the National and University level. ***Candidates should come out with a research timeline (Gantt Chart) after discussion with the university academic supervisor***

1.7 **Portfolio**

A candidate MUST keep a portfolio/ logbook of his/her training from the beginning of year 1. This portfolio should comprise the documentation of all the work-based assessments, courses attended and other training-related activities. ***The logbook is essential for registration in National Specialist Registry (NSR) following completion of the programme***

2. SUMMATIVE ASSESSMENT

2.1 Examinations

Candidates must apply to sit for the examination, to the Paediatric Department of the respective university before:

- 30st June for the October/November or
- 31st December for the April/May exam the following year.

Failure to do so may result in barring of the candidate from sitting for the respective examination.

2.1.1 Eligibility to sit for examinations

Part I Examination

- Satisfactory overall supervisors' reports (OSR) from at least 75% of postings prior to the examination
- At least ONE satisfactory CbD from each posting or 3-monthly training prior to the examination
- At least ONE satisfactory Mini CEX from each posting or 3-monthly training prior to the examination
- At least FIVE satisfactory MSF from for the year prior to the examination
- At least ONE satisfactory Child protection case discussion***** per year prior to the examination per year, from 2nd year onwards
- At least ONE satisfactory SAIL prior to the examination
- Completed TEN satisfactory Directly Observed Procedures (DOPS)
- Multi Source Feedback (MSF): 5 Multi-source feedback assessments per year by 3 doctors and 2 nurses. Must achieve at least an overall grade of 4 in a minimum of FIVE Multi Source Feedback (MSF) per year

Part II Examination

- Satisfactory overall supervisors' reports (OSR) from at least 75% of postings prior to the examination
- At least ONE satisfactory CbD from each posting or 3-monthly training prior to the examination
- At least ONE satisfactory Mini CEX from each posting or 3-monthly training prior to the examination
- At least ONE satisfactory SAIL from each posting or 3-monthly training prior to the examination
- At least FIVE MSF from for the year prior to the examination and must achieve at least an overall grade of 4 in a minimum of FIVE Multi Source Feedback (MSF) per year

- At least ONE satisfactory Child protection case discussion per year prior to the examination
- Completed FIFTEEN **cumulative** DOPS satisfactorily, prior to the examination

- Written certification from the Head of Department/coordinator responsible for the programme that confirms that he/she has satisfactorily completed the prescribed training under supervision.

- Submitted portfolio not later than one month before the examination.
- The Part II Examination can be taken only after passing the Part I Examination.
- The first attempt should not later than 4 years into the programme.

Research VIVA Examination

- Satisfactory overall supervisors' reports (OSR) from at least 75% of postings prior to the examination
- At least ONE satisfactory CbD from each posting or 3-monthly training prior to the examination
- At least ONE satisfactory Mini CEX from each posting or 3-monthly training prior to the examination
- At least ONE satisfactory SAIL from each posting or 3-monthly training prior to the examination
- At least FIVE satisfactory MSF from for the year prior to the examination
- At least ONE Child protection case discussion per year prior to the examination
- Written certification from the Head of Department/coordinator responsible for the programme that confirms that he/she has satisfactorily completed the prescribed training under supervision.
- Submitted portfolio not later than one month before the examination.

[Repeat assessments are allowed for CbDs and mini-CEX to achieve the satisfactory number]

MASTER OF MEDICINE (PAEDIATRICS) EXAMINATION (CONJOINED)

3.1. Examination Format

A. Part I Examination (Conjoined)

- The examination is usually held at the end of the 1st academic year. Another examination will be held 6 months later for those who do not satisfy the examination rules and regulations.

- The Part I Examination consists of a theory paper which is divided into Paper 1 and Paper 2.

Paper	Question type	Number of Questions	Marks
1	Multiple choice questions (MCQ)* One Best Answer (OBA) Extended Matching Item (EMI)	20 20 20	100 100 100
2	Long Modified Essay Question (MEQ) Short Modified Essay Question (MEQ) Slides	2 (50 marks each) 6 (25 marks each) 10 (5 marks each)	100 150 50
Total Marks			**600**

* There is NO negative marking for the MCQ.

B. Part II Examination (conjoined)

- The Part II Examination will be held twice a year, around April/May and October/November.
- Part II Examination consists of :

Examination Type/Station	Number of cases
Classical Long Case	1
Observed Long Case	1
Short Cases	5
Communication	1
Emergency Paediatrics	1

4.1. <u>Criteria for Passing</u>

<u>Part I</u>

To pass the Part I examination the candidate has to obtain a pass mark that has been agreed by members of the Standard Setting Panel.

<u>Part II</u>

A candidate is deemed to have passed the Part II examination if the total marks is ≥ 100 AND pass at least either observed long case or classing/long case.

Allocation of Marks For Each Clinical Station*		
i)	Clear pass	12
ii)	Pass	10
iii)	Fail	8
iv)	Clear Fail	4

* Except for the classical long case: pass for the classical long case is ≥ 20 marks.

An examination board will be appointed according to the University Laws presently available.

RESEARCH PROJECT

The objective of the research project is to introduce the candidate to research methodology, data analysis and journal writing.

Each candidate needs to undertake a research project approved by the respective university. The project must be conducted according to guidelines approved by the respective university. All candidates are encouraged to discuss with their supervisors early concerning starting a research project. The research report may be written up as a journal manuscript or dissertation book. In UMMC thesis proposal should be presented to the department by the 2nd year of training.

To obtain a **PASS**, the dissertation book or article must be submitted and examined according to the rules and regulations of the respective university.

5.1 Repeating an Examination

Part I Re-Examination

- To re-sit the Part I examination, the candidate needs to complete the required formative assessments satisfactorily
- The candidate must pass Part I Examination within 4 years in the programme, failing which, the candidate shall not be permitted to continue the programme

Part II Re-Examination

- To re-sit the Part II examination, the candidate needs to complete the required formative assessments satisfactorily

- A candidate who has failed the Part II examination may be permitted to sit for the examination at 6 monthly intervals.

- There are no limits to the number of attempts for Part II examination, but the total duration of the course must not exceed 7 years.

TERMINATION FROM PROGRAMME

A candidate at **any time** prevented from continuing with the course at the recommendation of Department, Faculty and after approval of the Senate of the respective university if the Department and Faculty find any of the following issues:

i. the candidate is unable to fulfill the requirements of the course
ii. formative assessments are deemed unsatisfactory
iii. the candidate has broken university rule
iv. the candidate fails to show improvement, after at least 2 warning letters and counselling sessions
v. the candidate has been proven to have committed a malpractice or a crime
vi. the candidate has not registered at the beginning of each annual session and without written approval of the Dean of the respective university
vii. the candidate who failed to pass the Part I examination by FOUR years into the programme
viii. the candidate who failed to fulfill the exit criteria within SEVEN years

AWARD OF DEGREE

The degree of **Master of Medicine (Paediatrics) / Doctor of Paediatrics / Master of Paediatrics** will be awarded to the candidate who has:

1. Fulfilled all the requirements of this programme:
   (a) Training
      - Satisfactory overall supervisors' reports (OSR) from at least 75% of postings
      - At least ONE satisfactory CbD from each posting or 3-monthly training
      - At least ONE satisfactory Mini CEX from each posting or 3-monthly training
      - At least one satisfactory SAIL from each posting or 3-monthly training (excluding the first year)
      - A*chieve at least an overall grade of 4* FIVE satisfactory MSF per year of training
      - At least ONE satisfactory Child protection case discussion from 2nd year of training
      - Completed ALL DOPS

   (b) Examination
      - PASS Part I and Part II examinations

   (c) Research Component
      - PASS Research Project

2. Approved to be awarded this degree by the Examination Board and approved by the Faculty and Senate of the respective university

3. Paid all fees due to the respective university including all other additional fees that the candidates may have incurred

THE OPEN SYSTEM PROGRAMME

Under this existing system, a candidate will be trained in Paediatrics for 2 years in a university hospital and another 2 years in an accredited hospital under the Ministry of Health.

List of Accredited Hospital as of June 2016 : Appendix 7

Appendix I

STAGES FOR PREPARATION OF RESEARCH PROJECT BY CANDIDATES

No.	Stage of Preparation
1.	Literature search and review.
2.	Finalized objective, methodology, and survey forms and questionnaires preparation.
3.	Preliminary oral presentation to Department with hard copy of 1-4.
4.	Ethics Committee request and clearance.
5.	Request for funding.
6.	Data collection.
7.	Results Tabulation and analysis.
8.	Writing, discussion and presentation to Supervisor with a sample in hard copy.
9.	Oral presentation and defending of research project to panel of Internal Examiners (with draft hard copy. Please provide a copy to Head of Department 2 weeks prior to presentation and copies of slides to panel.)
10.	Corrections and submission to supervisor (draft hard copy)
11.	Binding of hard copy.
12.	Submission of final copy (bound) to the Department.
13.	Examiners Board Meeting (i.e. corrected unbound/bound copy)

STUDY GUIDE

A. Year 1

1. Cardiology

Basic Knowledge	Clinical and technical skills
• Anatomy and physiology of foetal circulation • Circulatory changes at birth in health and disease • Variation of blood pressure with age • Conducting system of the heart and its relation to ECG • Recognise the changes on the ECG from birth to adolescence • Presentation of cardiac failure in children and infants • Pharmacology of drugs used in the treatment of heart failure • Recognition and management of acute cardiopulmonary arrest • Anatomy, diagnosis, functional consequences and complications of common congenital heart defects (VSD, ASD, PDA, Tetralogy of Fallot) • Rheumatic fever and rheumatic heart disease • Diagnosis and management of infective endocarditis • Indications for bacterial endocarditis prophylaxis and knowledge of an appropriate regime • Diagnosis and management of supraventricular tachycardia • Diagnosis and aetiology of hypertension • Pharmacology of anti-hypertensives • Kawasaki disease	• Perform cardiovascular examination • Differentiate pathological from innocent murmurs • Cardiopulmonary resuscitation of the infant and child • Measure and interpret blood pressure at different ages • Interpretation of chest radiographs, including pulmonary vascularity and cardiac size • Interpretation of ECGs • Differentiate cardiac and pulmonary causes of respiratory distress and cyanosis in the newborn

2. Clinical Pharmacology and Therapeutics

Basic Knowledge	Clinical and technical skills
• Knowledge of therapeutic drug monitoring • Principles of pharmacodynamics and kinetics	• Ability to write correct and legible prescriptions • Preparation and administration of intravenous injections and infusions • Calculation of drug dosage according to weight and surface area

3. Developmental Paediatrics

Basic Knowledge	Clinical and technical skills
• Normal development including gross motor, fine motor, speech and language, emotional, cognitive: normal variation and deviation • Normal visual and hearing development • Tests of vision and hearing at different ages • Recognition of strabismus in children • Influences of genetic and environmental factors on development • Autism and autistic spectrum disorders	• Perform developmental assessment • Able to recognise and elicit primitive and secondary reflexes

4. Endocrinology

Basic Knowledge	Clinical and technical skills
• Synthesis, transport, biochemical actions and control of hormones • Development and physiology of the thyroid gland • Aetiology of goitre • Diagnosis and management of hypothyroidism • Physiology of sex organ development • Physiology of the adrenal glands • Vitamin D and calcium metabolism	• Perform examination of the neck and thyroid gland • Recognise the signs of hyperthyroidism • Use of glucometer

• Diagnosis and management of hypocalcaemia and hypercalcaemia • Glucose metabolism • Aetiology of hypoglycaemia • Pathophysiology of diabetic ketoacidosis • Hypothalamic-pituitary axis (including the physiology of growth hormone and IGF) • Factors determining physical growth • Physiology of normal puberty	

5. Gastroenterology and Hepatology

Basic Knowledge	Clinical and technical skills
• The relationship of abnormal embryogenesis to clinical disorders eg diaphragmatic hernia, malrotation and atresias • Digestion and absorption of protein, carbohydrate and fat • Metabolism of bilirubin and causes of jaundice • Causes and pathophysiology of liver failure • Anatomy of the portal system in understanding the aetiology and signs of portal hypertension • Common manifestations of gastrointestinal disease in paediatrics (including vomiting, diarrhoea, gastrointestinal bleeding, abdominal pain) • Causes, pathophysiology and management of acute gastroenteritis and its complications, including secondary lactose intolerance • Causes, pathophysiology and management of chronic diarrhoea • Hirschsprung disease and causes of constipation	• Perform abdominal examination • Assessment of dehydration • Planning oral and intravenous fluid therapy • Interpretation of investigations in paediatric gastroenterology and hepatology

• Diagnosis and management of pyloric stenosis, intussusceptions and other causes of intestinal obstruction • Tests available for assessing gastrointestinal and hepatic disease	

6. Clinical Genetics and Congenital Defects

Basic Knowledge	Clinical and technical skills
• Basic genetics (chromosome structure and function, replication in meiosis and mitosis, protein transcription) • Basics of genetic disorders and mode of inheritance • Chromosomal abnormalities eg Down, Patau and Edward syndrome • Clinical and nutritional importance of major metabolic pathways eg carbohydrate, protein and fat metabolism	• Assessment of an infant or child with dysmorphic features

7. Genito-urinary system

Basic Knowledge	Clinical and technical skills
• Changes in renal physiology from newborn to adult • Physiology of water and electrolyte balance • Management of water and electrolyte imbalance • Requirements for fluid and electrolytes in health and disease • Understanding acid-base balance in health and disease • Urinary tract infection and reflux nephropathy • Diagnosis, pathogenesis and management of nephrotic syndrome	• Examination of the kidneys, bladder and genitalia • Obtain urine by appropriate techniques including suprapubic tap • Urinary catheterisation • Interpretation of urinalysis results • Understand the use and limitations of urine dipstick • Interpretation of electrolyte and blood gas results

including indications and long term complications of steroid use • Diagnosis, pathogenesis and management of acute postinfectious glomerulonephritis • Normal bladder innervations in understanding mechanisms of neurogenic bladder • Causes and pathophysiology of acute and chronic renal failure • The relationship of abnormal embryogenesis to clinical disorders • Understanding renal function tests	

8. Growth and maturation

Basic Knowledge	Clinical and technical skills
• Normal growth – physical and endocrinological changes • Influence of genetic, prenatal and postnatal (including environmental) factors on growth • Causes, diagnosis and management of failure to thrive • Physical and endocrinological changes of normal puberty • Measuring equipment for growth • bone age as a measure of physical maturity	• Accurate measurement of height, length, weight, head circumference, arm span and upper/lower segment ratio • Plotting and interpretation of growth charts • Assessment of Tanner staging of puberty

9. Haematology

Basic Knowledge	Clinical and technical skills
• Development, structure and function of formed elements of the blood and blood forming organs	• Interpretation of FBC and differential counts • Recognition of common abnormalities of blood film

• Changes in haemoglobin chain and peripheral blood elements after birth to adolescence • Metabolism of iron • Diagnosis, classification and basic investigations for childhood anaemia • Thalassaemia and other haemoglobinopathies • Diagnosis and management of G6PD deficiency and understanding principles of newborn screening • Mechanisms of normal haemostasis (including platelet physiology) and clinical and laboratory diagnosis of bleeding disorders • Diagnosis of immune thrombocytopaenicpurpura	• Assessment of haemostasis and interpretation of tests of haemostasis • Performing and interpreting Hess test

10. Immunology and Allergy

Basic Knowledge	Clinical and technical skills
• Normal body defence mechanisms at different ages • Understanding cellular and humoral immunity • Classification of hypersensitivity • Physiological basis and principles of immunization	

11. Infectious Diseases

Basic Knowledge	Clinical and technical skills
• Classification of infectious diseases • Mechanisms of intrauterine infections • Classification and pharmacology of common antimicrobial agents • Rationale use of antimicrobials • Mechanisms of drug resistance	• Investigation for pyrexia of unknown origin • Early recognition and management of septic shock • Avoidance of nosocomial infection in everyday practice

• Role of immunisation in the prevention of infectious disease • Characteristics and side-effects of routine vaccines in the Ministry of Health expanded programme of immunisation • Pathophysiology of septic shock • Diagnosis of common exanthems – measles, rubella, chickenpox • Understanding the transmission, presentation and management of common infections eg infectious diarrhoea, mumps, pertussis, tuberculosis, typhoid, hepatitis, poliomyelitis, dengue fever, malaria • Principles of prevention of nosocomial infections • Understanding the life-cycle, complications and treatment of common intestinal nematodes	• Collection and safe handling of microbiological specimens • Perform Mantoux test

12. Musculoskeletal

Basic Knowledge	Clinical and technical skills
• Clinical anatomy and physiology of bones and joints • Diagnosis and initial management of osteomyelitis and septic arthritis • Pharmacology of common anti-inflammatories and analgesics • Aetiology of arthritis in children	• Newborn hip examination • Examination of spine and joints

13. Foetal and Neonatal medicine

Basic Knowledge	Clinical and technical skills
• Physiological changes at birth including the foetal circulation and postnatal changes • Placental functions in health and disease • General principles of care of the newborn	• History taking – use relevant sources to elicit history in order to understand problems of the newborn • Screening examination at delivery including the Apgar score

• Infant nutrition • Thermal neutral environment and temperature regulation • Fluid balance and therapy • Nutrition in sick infants • Problems of preterm and post-term infants. LGA and SGA babies • Physiology of surfactant • Hyaline membrane disease and other causes of respiratory distress • Meconium aspiration • Neonatal jaundice • Hypoglycaemia • Neonatal infections • Fits in newborns • Haemorrhagic disease of the newborn • Perinatal asphyxia • Apnoea • Clinical anatomy of the scalp and brachial plexus in relation to common birth injuries • Pharmacology of drugs used in neonatal and paediatric resuscitation • Transport of the sick newborn	• Detailed examination including assessment of growth, gestational age, behavioural and neurological state • Routine postnatal examination • Neonatal resuscitation • Venepuncture and cannulation • Umbilical venous cannulation • Arterial access: umbilical and peripheral • Lumbar puncture • Passing nasogastric tube and orogastric tube to exclude choanal atresia and trachea-oesophageal fistula respectively • Exchange transfusion

14. Neurology

Basic Knowledge	**Clinical and technical skills**
• Basic clinical neuroanatomy • Development of the CNS in relation to common congenital malformations • Circulation of CSF in health and disease • Aetiology and pathophysiology of raised intracranial pressure • Classification of seizures • Basic principles of neurophysiological investigations (EEG, EMG, nerve conduction) • Diagnosis, pathogenesis and management of meningitis and encephalitis	• Perform neurological assessment on infants and children • Differentiation between upper and lower motor neuron lesions • Recognition of cerebellar and extrapyramidal signs • Perform lumbar puncture • Interpretation of CSF results

• Recognition and management of febrile convulsions • Aetiology of mental retardation • Diagnosis of common congenital malformations: spina bifida, hydrocephalus and microcephaly • Classification and diagnosis of cerebral palsy • Neurocutaneous diseases and syndromes • Classification of seizures and epilepsy syndromes • Pharmacology of anti-epileptic drugs • Parainfectious and inflammatory disorders of immunological origin egGuillainBarre syndrome • Neuromuscular diseases	

15. Nutrition

Basic Knowledge	Clinical and technical skills
• Normal nutritional requirements in infants and children • Physiology of lactation • Infant feeding including breast and formula feeding and weaning • Understanding the pathophysiology and management of protein-energy malnutrition • Signs and symptoms of deficiencies of specific nutrients and vitamins • Knowledge of various types of milk, liquid food preparations, nutritional supplements	• Take a history to estimate intake of major nutrients • Assessment of nutritional state of infants and children • Advise on health eating for normal children

16. Oncology

Basic Knowledge	Clinical and technical skills
• Characteristics of common malignancies of childhood (laekaemia, neuroblastoma, Wilm's tumour) • Principles of cancer therapy • Tumour lysis syndrome – pathophysiology and management	• Examination of lymph nodes and masses

17. Respiratory Medicine

Basic Knowledge	Clinical and technical skills
• Pulmonary physiology relevant to clinical practice: ventilation, perfusion, gas exchange and transport, haemoglobin dissociation curve, lung volumes, compliance, blood gas physiology • Mechanisms and causes of dyspnoea • Development of the lung • Differences between the infant and adult respiratory system • Central and peripheral control of respiration • Normal respiratory defences • Recognition and causes of respiratory failure • Mechanisms of respiratory symptoms and signs: cough reflex, wheezing, recession, stridor, grunting • Diagnosis and management of upper respiratory tract infections: rhinitis, pharyngitis, tonsillitis, otitis media, sinusitis, acute laryngotracheobronchitis, epiglottitis • Diagnosis and management of Lower respiratory tract infections: bronchiolitis, pneumonia • Causes of wheezing and stridor in infants and children • Diagnosis and management of asthma	• Ability to examine the respiratory system including the ear, nose and throat • Familiarity with use of peak flow meter and various inhaler devices • Assessment and recognition of respiratory failure • Interpret results of chest radiograph a, blood gases and oximetry • Obtain cultures: throat, nasopharyngeal and pernasal swab • Perform thoracocentesis for pleural effusion and pneumothorax

• Pharmacology of drugs used in treatment of asthma • Obstructive sleep apnoea • Chronic cough: diagnosis and management • CSLD/Bronchiectasis: diagnosis and management	

18. Research and Statistics

Basic Knowledge	Clinical and technical skills
• Basic medical statistics and tests of hypothesis	

19. Skin and related tissues

Basic Knowledge	Clinical and technical skills
• Common skin lesions in the newborn • Diagnosis and management of common skin problems eg eczema, seborrhoeic dermatitis, impetigo, napkin rash, scabies and pediculosis	• Ability to describe dermatological abnormalities in terms of morphology, configuration and distribution

B. Year 2 and 3

Candidates will rotate through subspeciality disciplines during these 2 years besides continuing with training in general paediatrics and neonatology. During these 2 years, the candidate should:

- understand the natural history, diagnosis and management of childhood diseases
- be able to take a thorough history, perform a complete physical examination, request relevant investigations, formulate the provisional and differential diagnoses and manage the patient appropriately

- be able to perform common diagnostic and therapeutic procedures and interpret the results of investigations: understanding the indications, contraindications, limitations and possible contraindications
- be able to appreciate the effect of disease on physical, mental and social well-being of the patient
- be able to plan in consultation with senior colleagues, the further management of the patient in a multidisciplinary setting
- be able to apply the rules of evidence to clinical, investigational and published data in order to determine their applicability and validity in reviewing various aspects of disease management.

C. Year 4

Candidates function as a junior specialist/ registrar during their final year, assisting the consultant in management of the patients. During this year, the candidate should:

- be a role model in the teaching and training of junior doctors and other health personnel
- assist in performing the managerial duties of the ward
- apply rules of evidence to clinical, investigational and published data, in conducting research, scientific writing and audit
- identify areas of deficiency in their performance and to rectify these by utilizing appropriate clinical and educational resources

RECOMMENDED READING LIST FOR THE MASTER OF MEDICINE (PAEDIATRICS) PROGRAMME

The following list of book titles is by no means exhaustive but is a useful list of Paediatric books for the Paediatric Postgraduate Masters' Student. The list includes books that cover both General Paediatrics Overview and various Paediatric Subspecialty References. These books are available in either the Paediatric Department Library or the main Medical Library. Books titles with the asterisk * indicate recommended reading material for the Master of Medicine (Paediatrics) Programme.

Some of the books below have newer editions

Standard Paediatric Texts:

1. ***Forfar and Arneil's Textbook of Paediatrics.*** Neil McIntosh *et al* (eds). Churchill Livingstone; 7th edition, 2008.

2. ***Nelson Textbook of Paediatrics.*** Robert M Kliegman *et al* (eds). WB Saunders; 19th edition, 2011.

3. ***Community Paediatrics*.** Colin Thomson, Leon Polnay (eds). Churchill Livingstone; 3rd edition, 2002. **(**This book is concerned with the interrelationship between environment and health and its impact on children and adolescents. Recommended for beginners).

4. ***Pediatric Clinical Skills***. Richard B Goldbloom. Saunders. 4th edition, 2010.

5. ***Zitelli and Davis' Atlas of Pediatric Physical Diagnosis: Expert Consul****t.* 6th edition. Elsevier, 2012

6. ***The Normal Child*** – S**ome Problems of the Early Years and Their Treatment**. Illingsworth RS; 10th edition, 1992.

Colour Atlas for Paediatrics

1. **The Hospital for Sick Children: Atlas of Pediatrics.** *Ronald M Laxer (ed). Jaypee, 2005.*

2. ***Atlas of Pediatric Physical Diagnosis.*** Basil J Zitelli & Holly W Davis. Mosby; 6th edition, 2012.

3. ***Smith's Recognizable Patterns of Human Malformation.*** Kenneth Jones. Saunders; 7th edition, 2013.

Paediatric Gastroenterology

1. ***Pediatric Gastrointestinal Disease: Pathophysiology, Diagnosis, Management***. W Allan Walker *et al* (eds). BC Decker; 5th edition, 2008.

Paediatric Hepatology

1. ***Diseases of the Liver and Biliary System in Children***. DA Kelly (ed). Blackwell Publishing; 3rd Edition, 2009.

2. ***Liver Disease in Children.*** Frederick Suchy *et al* (eds). Mosby; 4th edition, 2014.

Paediatric Nutrition

1. ***Handbook of Pediatric Nutrition***. Patricia Samour. Jones and Barlett; 3rd edition, 2005.

2. ***Pediatric Nutrition Handbook***. American Academy of Pediatric Committee on Nutrition. 6th edition, 2009.

Paediatric Neurology

1. ***Clinical Pediatric Neurology: A Signs and Symptoms Approach***. Gerald M Fenichel. Elservier; 7th edition, 2013.

2. ***Paediatric Neurology: Principles and Practice, 2 Volume Set***. Kenneth Swaiman, Stephen Ashwal, Donna Ferrier (eds). Elservier; 5th edition, 2012.

Paediatric Cardiology

1. ***Heart Disease in Paediatrics***. Jordon SC and Scott O. Butterworth; 3rd edition, 1994 (This is a highly readable book but no new edition available).

2. ***Nadas' Paediatric Cardiology***. Donald Flyer (ed). WB Saunders; 2nd edition, 2006.

3. ***How to read Paediatric ECGs.*** Myung K Park & Warren G Guntheroth. Elservier; 4th edition, 2006.

4. ***Cardiac Arrhythmias: Practical Notes on Interpretation and Treatment.*** David H Bennett. Butterworth; 8th Ed, 2013.

5. ***Pediatric Cardiology for Practitioners.*** Myung K Park. Mosby; 5th edition, 2007.

6. ***Feigenbaum's Echocardiology***. Harvey Feigenbaun *et al* (eds). Lippincott Williams & Wilkins; 7thed 2009.

7. ***Moss & Adams – Heart Diseases in Infants, Children and Adolescents***. Hugh D Aleen, eds. Lippinott Williams & Wilkins; 8th edition, 2012.

Paediatric Infectious Disease

1. ***Red Book Atlas of Pediatric Infectious Diseases.*** Carol Baker. American Academy of Pediatrics; 2nd edition, 2007.

2. ***Principles and Practice of Pediatric Infectious Disease: Text with CD-ROM (Principles and Practice of Pediatric Infectious Diseases)***. Sarah Long, Larry K Pickering *et al* (eds). WB Saunders & Elserviers; 3rd edition, 2009.

3. ***Infectious Diseases of the Fetus and the Newborn Infant***. Jack S Remington, Jerome Klein. Elsevier Saunders; 7th edition, 2010.

4. ***Pediatric Infectious Diseases – Requisites***. Jeffrey Bergelson, TheoklisZaoutis, Samir S. Shah (eds). Mosby; 2008.

5. ***MIMS' Medical Microbiology.*** Richard Goering, Dockrell Hazel, Mark Zuckerman (eds). Elsevier; 5th edition, 2012.

6. ***Introduction to Modern Virology***. NJ Dimmock, AJ Easton, KN Leppard. Blackwell Sciences; 6th edition, 2007.

Immunology &Vaccinology

1. ***Malaysian Immunization Manual***. Lee EL & Choo KE. College of Paediatrics, Academy of Medicine Malaysia. 2nd edition, 2008.

2. ***Basic Immunology***: ***Functions and Disorders of the Immune System.*** Abul K Abbas, Andrew H Lichtman. Saunders; 3rd edition, 2010.

3. ***How the Immune System Works***. Lauren Sompayrac. Blackwell Publisher; 4th edition, 2012.

4. ***The Vaccine Handbook – A Practical Guide for Clinicians.*** Gary S Marshall, *et al* (eds). Lippincott Williams & Wilkins; 4th edition, 2012.

Accident & Emergency Paediatrics

1. ***Pediatric Emergency Medicine – A comprehensive Study Guide.*** Strange GR, Ahrens WR, Lelyrelds & Schafermeyer, RW. McGraw Hill; 2nd edition, 2002.

Neonatology

1. ***Fararoff & Martin's Neonatal & Perinatal Medicine***. Richard Martin, Avry Fanaroff, et al (eds). Elsevier Mosby; 9th edition, 2010.

2. ***Textbook of Neonatology.*** JM Rennie & NRC Roberton. Elservier; 5th edition, 2012.

3. ***A Manual of Neonatal Intensive Care.*** JM Rennie, NRC Roberton. Arnold International; 5th edition, 2013.

Paediatric Respiratory Medicine

1. ***Kendig and Chernick's Disorders of the Respiratory Tract in Children***. Victor Chernick, Robert W. Wilmott, Andrew Bush. Elsevier Sanders; 8th edition, 2012.

2. ***Pediatric Respiratory Medicine.*** Lynn Taussig, Louis I Landau. Mosby; 2nd edition, 2008.

3. ***Comprehensive Perinatal and Pediatric Respiratory Care.*** Kent Whitaker. Thomson; 4th edition, 2015.

4. **Respiratory Physiology. The Essentials**. John B. West. Lippincort, Williams and Wilkins; 9th Edition, 2012

Paediatric Intensive Care

1. ***Rogers' Textbook of Pediatric Intensive Care.*** David G Nichols, *et al* (eds). Lippincott, Williams and Wilkins; 4th edition, 2008.

Paediatric Hematology and Oncology

1. ***Principles and Practice of Pediatric Oncology.*** Pizzo P and Poplack D. Lippincott Williams & Wilkins; 6th edition, 2010.

2. ***Manual of Pediatric Hematology and Oncology***. Philip Lanzkowsky. Elsevier Academic Press; 5th edition, 2010.

3. ***Hematology of Infancy and Childhood; volume 1 and II.*** Nathan and Oski. WB Saunders; 7th edition, 2008.

4. ***Colour Atlas of Paediatric Haematology.*** Ian M Hann, *et al* (eds). Oxford Medical Press; 1st edition, 1996.

Paediatric Nephrology

1. ***Clinical Pediatric Nephrology.*** KanwalKher, *et al* (eds). Informa; 2nd edition, 2006.

2. ***Pediatric Nephrology.*** Ellis D Avner, *et al* (eds). Lippincott Williams and Wilkins; 6th edition, 2009.

Paediatric Dermatology

1. ***Color Textbook of Pediatric Dermatology: Text with CD-ROM.*** William L Weston, *et al* (eds). Mosby; 4th edition, 2007.

2. ***Hurwitz Clinical Pediatric Dermatology: A Textbook of Skin Disorders of Childhood and Adolescence.*** Amy S Paller, *et al* (eds). Mosby; 4th edition, 2011.

Paediatric Rheumatology

1. **Pediatric Rheumatology in Clinical Practice.** *Patricia Woo, et al (eds). Springer; 1st edition, 2007.*

2. ***Textbook of Pediatric Rheumatology.*** *James* T Cassidy, et al (eds). Elservier ; 6th edition, 2010.

Paediatric Endocrinology

1. ***Pediatric Endocrinology: A Practical Clinical Guide.*** Sally Radovick and Margaret H Margaret Gillivray. Humana Press; 2nd edition, 2013

2. ***Brook's Clinical Paediatric Endocrinology.*** Brook CG, Hindermash P, Clayton. Wiley-Blackwell; P 6th edition 2009.

Medical Genetics

1. ***Practical Genetic Counselling.*** Peter Harper. Edward Arnold Ltd; 7th edition, 2010.

2. ***Thompson & Thompson Genetics in Medicine.*** Robert Nussbaum,Roderick R. McInnes, Huntington F. Willard. Elsevier; 7th edition, 2007.

3. ***Smith's Recognizable Patterns Of Human Malformation.*** Kenneth L. Jones et al. Elsevier; 7th edition, 2013.

Inherited Metabolic Disorders

1. ***Inborn Metabolic Diseases: Diagnosis and Treatment.*** John Fernandes, Jean-Marie-Saudubray, Georges van den Berghe, John H. Walter. Springer; 5th edition, 2011.

2. ***Physician's Guide to the Laboratory Diagnosis of Metabolic Diseases.*** N. Blau, M. Duran, M.E. Blaskovics, K.M. Gibson, C.R. Scriver. Springer; 2nd edition, 2004.

Medical Journals of Interest

1. Archives of Diseases of Childhood
2. Journal of Pediatrics
3. Pediatrics
4. Journal of Paediatrics and Child Health
5. Paediatric Clinics of North America
6. Paediatric Infectious Disease Journal
7. Archives of Pediatrics and Adolescent Medicine
8. Developmental Medicine and Child Neurology
9. European Journal of Paediatrics
10. Annals of Tropical Paediatrics
11. Lancet
12. New England Journal of Medicine
13. Journal of Paediatrics Gastroenerology and Nutrition
14. Paediatric Respiratory Reviews

Recommended Websites:

1. Neonatology on the web
2. Medscape
3. Cochrane Library
4. BMJLearning

   Uptodate
5. OMIM

Appendix 2

OVERALL SUPERVISOR'S REPORT (OSR)

Masters of Medicine Conjoined Programme (UM, UKM, USM, UPM, UITM)
Overall Supervisor's Report

Trainee's Name																							
Date of enrolment											Matric number												
Phase of study											Hospital												
Posting											Date of posting												

Please mark the box which corresponds with your observations in each category. Please make judgment according to the criteria outlined and not according to your experience with other students under your supervision.

The behavior outlined in the first box in each category is the 'gold standard' by which the student should be judged. A tick here indicates excellent performance. Tick in other boxes indicate performance that is good, satisfactory, further improvement necessary (i.e. borderline), further improvement essential (i.e. weak) in descending order

History

Excellent	☐	Consistently elicit problem related data from patient and other relevant sources, stresses important points, well organise approach.
Good	☐	As above but less consistent.
Satisfactory	☐	As above but sometimes concentrates on data not related to the problem, sometimes omits to consult other sources, occasionally misses important information.
Borderline	☐	Approach not well organized, not always problem related, frequently misses important data.
Weak	☐	Approach not organized, frequently not problem related/wrongly elicit data, important data missed on most occasions

Physical Examination

Excellent	☐	Consistently elicits and interprets correctly all signs, techniques and organizational approach consistently good.
Good	☐	As above, but less consistent.
Satisfactory	☐	As above, sometimes misses important physical signs.
Borderline	☐	Approach technically imperfect and not very systematic: frequently misses important signs.
Weak	☐	Approach technically unacceptable and not systematic, important signs missed on most occasions.

Investigations

Excellent	☐	Consistently plans and interprets investigations appropriate to the problem with attention to specificity, reliability, patient safety and comfort, cost and, explain reasons for and nature of investigations to patients.
Good	☐	As above, but less consistent.
Satisfactory	☐	As above but occasionally requests investigations not appropriate to the problem and/or without attention to specificity, reliability, etc. sometimes misses important data.
Borderline	☐	Frequently requests investigations not appropriate to the problem and/or without attention to specificity, reliability, patient safety and misses important data.
Weak	☐	Consistently makes inappropriate decisions in ordering investigations, consistently misinterprets and/or misses important data.

Diagnostic ability and reasoning		
Excellent	☐	Consistently makes careful reasoned deductions from available data (history, physical examination, investigations) to arrive at the appropriate decision
Good	☐	As above, but less consistent.
Satisfactory	☐	As above, but occasionally makes incorrect deductions. Most times able to give correct provisional diagnosis.
Borderline	☐	Frequently does not follow a logical approach to deduction from available data, occasionally gives incorrect provisional diagnosis.
Weak	☐	Illogical reasoning and deductions. Frequently makes incorrect diagnosis.
Procedural skills		
Excellent	☐	Consistently carries out procedures with an appropriate level of technical skill and with due consideration to the patient.
Good	☐	As above, but less consistent.
Satisfactory	☐	As above, but not equally skilled in all manipulative tasks.
Borderline	☐	Not skilled in most manipulative tasks, occasionally exhibits lack of consideration and/or care and attention to detail.
Weak	☐	Serious lack of skill in a number of manipulative tasks, frequently exhibits lack of care and attention to detail, not considerate to the patients.
Patient Management		
Excellent	☐	Consistently suggests appropriate management, exhibits awareness of the role and possible complications of the proposed intervention (e.g. adverse drug reaction, surgical morbidity), self-reliant and conscientious in approach, involves patients, family and community in management decision.
Good	☐	As above, but less consistent.
Satisfactory	☐	As above, but occasionally suggests inappropriate management.
Borderline	☐	Shows some lack of awareness of role of proposed interventions and their possible complications, is unsure/not conscientious in implementing management.
Weak	☐	Frequently makes inappropriate management decisions.
Record Keeping		
Excellent	☐	Consistently records legibly and updates accurately patient's problems and management progress, with emphasis on own observations and examinations and provides regular informative summary of progress.
Good	☐	As above, but less consistent.
Satisfactory	☐	As above, but occasionally one or more aspects of record keeping inadequate.
Borderline	☐	Records are frequently illegible, not up-to-date, inaccurate and poorly organized.
Weak	☐	Records are frequently inadequate according to above criteria
Knowledge		
Excellent	☐	Consistently applies appropriate knowledge of basic and clinical sciences to the solution of patient problems.
Good	☐	As above, but less consistent.
Satisfactory	☐	As above, but occasionally has gaps in knowledge and/or difficulty in application to patient problems. However makes effort to seek information.
Borderline	☐	Inadequate knowledge and/or difficulty in application to patients' problems. Sometimes makes effort to seek information.
Weak	☐	As in borderline, but lacks initiative in seeking information.
Personal and Professional Attitudes		
Excellent	☐	Consistently manages own learning by asking questions and searching for answers (proactive): improves progress as a learner and as a future practitioner by seeking feedback and acting on the latter, and shows evidence of accepting responsibility, being caring, thorough, trustworthy, self-driven and respecting confidentiality.

Good	☐	As above, but less consistent or as effectively.
Satisfactory	☐	As above, but with occasional deficiencies in self-directed learning, self-monitoring and/or professional qualities as defined above.
Borderline	☐	Frequently deficient in area as defined above.
Weak	☐	Consistently deficient in areas defined above

Communication skills

Excellent	☐	Consistently communicates with patients and his/her family, listens, be sensitive to the needs of the patients and family comforts, gives equal priority to the patient/family and the illness: establishes and maintains professional relationship with patient; realizes that the patient's attitude to the doctor affects management and cooperation: is aware that owns personality affects patient's reaction/behavior: provides information accurately and clearly.
Good	☐	As above, but less consistently or effectively.
Satisfactory	☐	As above, but with occasional deficiency in communication skills as outlined above.
Borderline	☐	Frequently deficient in communicating skills outlined above.
Weak	☐	Consistently deficient in communicating skills outline above.

Conduct with Other Professionals

Excellent	☐	Consistently communicating/working with other professionals, is courteous, sensitive to needs of others: fulfils role in team appropriately by collaborating readily with others: provides clear information, instructions/advice to others: readily accepts reasonable advice/criticism from others.
Good	☐	As above, but less consistently or effectively.
Satisfactory	☐	As above, but with occasional deficiencies in the areas outlined above. .
Borderline	☐	Frequently deficient in areas outlined above.
Weak	☐	Consistently deficient in areas outlined above.

Participation in Teaching-Learning Activities

	Excellent	Good	Satisfactory	Borderline	Weak	NA
1. Ward round	☐	☐	☐	☐	☐	☐
2. Clinic	☐	☐	☐	☐	☐	☐
3. Case presentation	☐	☐	☐	☐	☐	☐
4. Tutorial	☐	☐	☐	☐	☐	☐
5. Journal read	☐	☐	☐	☐	☐	☐
6. Mortality summary	☐	☐	☐	☐	☐	☐

*NA not applicable

Overall Clinical Competence

☐ Excellent
☐ Good
☐ Satisfactory
☐ Borderline
☐ Weak

General comments regarding areas of concern																							
Supervisor's name																							
Assessor's signature												Trainee's signature											

Date :

Appendix 3

CASE-BASED DISCUSSION (CbD)

Masters of Medicine Conjoined Programme (UM, UKM, USM, UPM, UITM)
Assessment by Case-Based Discussion

Trainee's Name			
Date of enrolment		Matric Number	
Date of assessment		Student's MMC Number	
Phase of study		Posting	
Hospital			

Clinical Setting: ☐A&E ☐OPD ☐In-patient ☐Neonates ☐Acute Admission

Clinical Problem Category: ☐Sepsis ☐CVS ☐Shock ☐Gastro ☐Neuro ☐Airway/Breathing ☐Behaviour/Developmental ☐Others (Please specify):

Write a brief clinical summary of the case here i.e. 5-year-old girl with fever for two months; 2-months-old boy with convulsion and fever; 12-year-old girl with multiple joint pain.

New or follow up case: ☐New ☐Follow up

If follow up, number of time patient seen before by trainee: ☐0 ☐1-4 ☐5-9 ☐>10

Complexity of case in relation to stage of trainee: ☐Low ☐Average ☐High

Who chose this case? ☐Trainee ☐Assessor

Focus of clinical encounter: ☐History ☐Diagnosis ☐Management ☐Explanation

Using the given scales, please grade the areas listed below:	Weak	Borderline	Satisfactory	Good	Excellent	UC
	1	2	3	4	5	
Medical record keeping	☐	☐	☐	☐	☐	☐
Clinical assessment	☐	☐	☐	☐	☐	☐
Investigation and referrals	☐	☐	☐	☐	☐	☐
Management of challenging and complex situations	☐	☐	☐	☐	☐	☐
Risk assessment	☐	☐	☐	☐	☐	☐
Treatment	☐	☐	☐	☐	☐	☐

*U/C = Please mark this if you have not observed the behavior and therefore unable to comment.

In relation to **THIS CASE**, do you have any concerns about this trainee's knowledge base?

☐No concern ☐Serious concern ☐Minor concern ☐Unable to judge

Please document any concerns you have about this trainee's knowledge base:

In relation to **THIS CASE**, do you have any concern about this trainee integrity, ethical, personal and professional practice or any other areas not highlighted by the questions?

☐No concern ☐Serious concern ☐Minor concern ☐Unable to judge

Please document any concerns you have about this trainee's integrity, ethical, personal and professional practice or any other areas:

Please grade the area listed below using the given scale (1 -6)		Scale
1. On the basis of **THIS CASE**, how would you rate this trainee's overall clinical care for their stage of training		1. Unsafe 2. Below expectation 3. Borderline 4. Meets expectation 5. Above expectation 6. Well above expectation 7. Unable to comment
2. On the basis of **THIS CASE**, how would you rate this trainee's overall clinical care in relation to the standard expected at confirmation of completion of training		

Is there anything especially good you wish to comment on?

Suggestions for development

Agreed action

Assessor's Name																									
MMC's Number										Assessor's position:	☐ Consultant		☐ Specialist												
Number of previous Paediatric CBD observed by assessor with any trainee:	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 5-9	☐ >9																	
What training have you had in the use of this assessment tool: ☐ Have read guidelines ☐ Face-to face ☐ Web/CD-Rom																									
Time taken for discussion (in minutes):																									
Time taken for feedback (in minutes):																									
Assessor's signature																									
Student's signature																									

Date :

Appendix 4

MINI CLINICAL EXAMINATION (MINI CEX)

Masters of Medicine Conjoined Programme (UM, UKM, USM, UPM, UITM)
Assessment by Mini CEX

Trainee's Name			
Date of enrolment		Matric Number	
Date of assessment		Student's MMC Number	
Phase of study		Posting	
Hospital			

Clinical Setting: ☐ Neonates ☐ In-patient ☐ OPD ☐ A&E ☐ Acute Admission

Clinical Problem Category: ☐ Sepsis ☐ CVS ☐ Shock ☐ Gastro ☐ Neuro ☐ Airway/Breathing ☐ Behaviour/Developmental ☐ Others (Please specify):

New or follow up case: ☐ New ☐ Follow up

If follow up, number of time patient seen before by trainee: ☐ 0 ☐ 1-4 ☐ 5-9 ☐ >10

Focus of clinical encounter: ☐ History ☐ Diagnosis ☐ Management ☐ Explanation

Complexity of case in relation to stage of trainee: ☐ Low ☐ Average ☐ High

Using the given scales, please grade the areas listed below:	Weak	Borderline	Satisfactory	Good	Excellent	*UC
	1	2	3	4	5	6
History taking	☐	☐	☐	☐	☐	☐
Communication skills with child/young person	☐	☐	☐	☐	☐	☐
Communication skills with parent/carer	☐	☐	☐	☐	☐	☐
Examination	☐	☐	☐	☐	☐	☐
Clinical judgement	☐	☐	☐	☐	☐	☐
Initial management	☐	☐	☐	☐	☐	☐
Professionalism	☐	☐	☐	☐	☐	☐
Organisation/efficiency	☐	☐	☐	☐	☐	☐
Overall clinical care	☐	☐	☐	☐	☐	☐

*U/C = Please mark this if you have not observed the behavior and therefore unable to comment.

Pease address any concern or serious issues regarding the trainee via appropriate channels.

Areas of strength:	Suggestions for development:
Agreed Action:	

Assessor's Name			
MMC's Number		Assessor's position:	☐ Consultant ☐ Specialist

Number of previous Paediatric Mini-CEX observed by assessor with any trainee:	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 5-9	☐ >9	
What training have you had in the use of this assessment tool: ☐Have read guidelines ☐Face-to face ☐ Web/CD-rom									
Time taken for discussion (in minutes):									Time taken for feedback (in minutes):
Assessor's signature									Trainee's signature

Date :

Appendix 5

DIRECTLY OBSERVED PROCEDURAL SKILLS (DOPS)

Masters of Medicine Conjoined Programme (UM, UKM, USM, UPM, UITM)
Directly Observed Procedural Skills (DOPS)

Trainee's Name			
Date of enrollment		Matric Number	
Date of assessment		Student's MMC Number	
Phase of study		Posting	
Hospital			

Clinical Setting: ☐A&E ☐OPD ☐In-patient ☐Neonates ☐Acute Admission

Clinical Problem Category: ☐Sepsis ☐ CVS ☐Shock ☐Gastro ☐Neuro ☐ Airway/Breathing ☐Behaviour/Developmental ☐Others (Please specify):

Procedural Number: Other:

Number of times procedure performed by trainee: ☐0 ☐1 - 4 ☐5 - 9 ☐>10

Complexity of the procedure: ☐Difficult ☐Low ☐Average ☐High

Using the given scales, please grade the areas listed below:	Weak	Borderline	Satisfactory	Good	Excellent	UC
	1	2	3	4	5	6
1. Demonstrate understanding of indications, relevant anatomy, technique of procedure	☐	☐	☐	☐	☐	☐
2. Obtained informed consent	☐	☐	☐	☐	☐	☐
3. Demonstrate appropriate preparation pre-procedure	☐	☐	☐	☐	☐	☐
4. Appropriate anaesthesia or safe sedation	☐	☐	☐	☐	☐	☐
5. Technical ability	☐	☐	☐	☐	☐	☐
6. Aseptic technique	☐	☐	☐	☐	☐	☐
7. Seek help where appropriate	☐	☐	☐	☐	☐	☐
8. Post procedural management	☐	☐	☐	☐	☐	☐
9. Communication skills	☐	☐	☐	☐	☐	☐
10. Consideration of patient and professionalism	☐	☐	☐	☐	☐	☐

*U/C= Please mark this if you have not observed the behavior and therefore unable to comment.

Please use this space to record areas of strength or any suggestions for development

Strength of trainee	**Suggestions for development**

Assessor's Name	
MMC's Number	
Assessor's email	

Please note: by providing your email address, Conjoined Board reserve the right to contact you to confirm individual assessments were conducted and completed in line with local procedures and by any good assessment practice

Assessor's position:	☐Consultant	☐Specialist	☐Senior Registrar		☐Nurse		☐ Others (please specify):			
Number of previous Paediatric DOBS observed by assessor with any trainee:	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 5-9	☐ >9		
Have you had training in the use of this assessment tool?	☐Have read guidelines	☐Face-to face	☐Web/CD-Rom							
Time taken for discussion (in minutes):	Time taken for feedback (in minutes):									
Assessor's signature Date :	Trainee's signature									

Core Procedures

Include all procedures performed in Neonatal Resuscitation (NRP), Paediatric Advance Life Support (PAL) and those required by the National Specialist Register for accreditation as a General Paediatrician.

	Procedure	Code
1.	Peripheral venous cannulation	01
2.	Peripheral artery cannulation	02
3.	Capillary blood sampling	03
4.	Arterial puncture	04
5.	Central venous insertion	05
6.	Percutaneous long line insertion	06
7.	Collection of blood from central line	07
8.	Umbilical vein cannulation	08
9.	Umbilical artery cannulation	09
10.	Exchange transfusion	10
11.	Intraosseous cannulation	11
12.	Basic ventilation indication, set up	12
13.	Bag, mask and valve ventilation	13
14.	Surfactant administration	14
15.	Endotracheal intubation	15
16.	External chest compression	16
17.	Chest tube insertion	17
18.	Suprapubic aspiration of urine	18
19.	Urethral catheterization	19
20.	Peritoneal dialysis	20
21.	Peak flow	21
22.	Bone marrow aspiration and trephine biopsy	22
23.	Lumbar puncture	23
24.	Ultrasound neonatal brain	24
25.	Electrocardiogram	25
26.	Basic ECHO	26
27.	Mantoux test	27
28.	Vaccination – BCG	28
29.	Vaccination – intramuscular injection	29
30.	Vaccination – subcutaneous injection	30

Appendix 6

SHEFFIELD INSTRUMENT FOR LETTERS (SAIL)

Masters of Medicine Conjoined Programme (UM, UKM, USM, UPM, UITM)
Sheffield Instrument for Letters (SAIL)

Trainee's Name			
Date of enrolment		Matric Number	
Phase of Study		Trainee's MMC Number	
Hospital		Posting	

Patient's registration number:

Type of patient: New patient / Follow up / Referral / Other

Complexity of case(s) referred in the letter: Low / Average / High

How is the letter chosen: Selected / Random

Problem list		
1. Is there a medical problem list?	Yes	No
2. Are any obvious and significant problems omitted?	Yes	No
3. Are any irrelevant problems listed?	Yes	No
History		
4. Is there a record of the family's current concerns being sought or clarified?	Yes	No
5. Is the documented history appropriate to the problem(s) and question(s)?	Yes	No
Examination		
6. Is the documented examination appropriate to the problem(s) and question(s)?	Yes	No
Overall assessment		
7. Is the current state of health or progress clearly outlined?	Yes	No
8. Are the family's problems or questions addressed?	Yes	No
9. Is/Are the referring doctor's question(s) addressed?	Yes	No
Management		
10. Is a clear plan of investigation or non-investigation recorded?	Yes	No
11. Are the reasons for the above plan adequately justified?	Yes	No
12. Are all known treatments, or the absence of treatment, recorded clearly?	Yes	No
13. Are all drug doses stated in formal units?	Yes	No
14. Is adequate justification given for any changes to treatment?	Yes	No
15. Is there an adequate record of information shared with the family?	Yes	No
Follow up		
16. Is it clear whether or not hospital follow-up is planned?	Yes	No
17. Is the purpose of follow-up adequately justified?	Yes	No
Clarity		
18. Is there much unnecessary information?	Yes	No
19. Does the structure of the letter flow logically?	Yes	No
20. Are there any sentences you don't understand?	Yes	No

GLOBAL RATING: (PLEASE MARK HOW MUCH YOU AGREE WITH THE STATEMENT

"This letter clearly conveys the information I would like to have about the patient if I were the next doctor to see him/her."

1	2	3	4
No, insufficient detail	**No, would require a lot more detail**	**No, would require some more detail**	**Yes, the letter conveys the information**

Anything especially good?

Suggestions for development

Assessor's Name			
MMC's Number		Assessor's position:	☐Consultant ☐Specialist

Assessor's signature: **Trainee's signature:**

Date: **Date:**

Appendix 7

MULTISOURCE FEEDBACK (MSF)

Conjoint Program (UKM, UM, USM, UPM, UITM)
Master of Paediatrics / Master of Medicine (Paediatrics)

Multisource Feedback (MSF) Paediatrics
CONFIDENTIAL – to be submitted directly to the Educational Supervisor

Trainee's Full Name:																				
Trainee's MMC Number:							**Period of Assessment:** (dd/mm/yyyy)_____to _____													

Assessor's position:
Consultant ☐ Specialist ☐ Senior Medical Officer ☐ Matron/Sister ☐ Medical Officer ☐
House Officer ☐
Nurse/Paramedic ☐ Others (specify):

Location/Setting of assessment: General Paed Ward ☐ PICU ☐ NICU ☐ Special Care Nursery ☐
Subspecialty /Other wards (Specify) ☐

Grading : 5 – Above Expectations; 4- Meets Expectations; 3-Borderline; 2- Below expectations; 1- Area of concern

Domain		Comments Anything especially good? Any concerns?
Professional competence - clinical decision making - Technical/proceduralskills - aware of limitations, consults accordingly - able to prioritise - able to manage complex situations	Grade: ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1 ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1 ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1 ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1 ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1	

Working with colleagues /Teamwork (medical officers, house officers, nurses) - responds quickly - accessible reliable; punctual - arranges for cover - respects colleagues' confidentiality, rightsand beliefs	Grade ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1 ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1 ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1 ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1	
Leadership and initiative - willing to take charge ofthe situation as needed - able to manage complex situations - teaching and guiding juniors - honesty and integrity	Grade: ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1 ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1 ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1 ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1	

Relationship with patients and their parents/family - rapport with family - treats patients fairly without discrimination - respects patient and family rights	Grade: ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1 ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1 ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1	
Verbal Communication skills - gives understandable information - easily understood by patients and colleagues	Grade ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1 ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1	

Are there any specific concerns regarding this trainee's performance or health?
If yes, please provide details (e.g. particular incidents)

Overall – How do you rate this trainee? ☐ 5 ☐ 4 ☐ 3 ☐2 ☐ 1
Conclusions and Comments:

Assessor's Full Name:																					
Assessor's MMC/Registration No.									**Assessors Signature: and stamp : Date:**												

Reminder: do not hand the MSF to the trainee. Submit directly to the Educational Supervisor

Appendix

SAFEGUARDING CHILDREN CASE BASED DISCUSSION (CBD)

Conjoint Program (UKM, UM, USM,UPM, UITM) Master of Paediatrics / Master of Medicine (Paediatrics)

Safeguarding Children Case Based Discussion

Date:

Trainees's Name																											
Date of enrolment	D	D	/	M	M	/	Y	Y	Y	Y	Matric Number																
Date of assessment	D	D	/	M	M	/	Y	Y	Y	Y	MMC Number																
Year of study											Posting																
Hospital																											

Category of abuse involved: ☐ physical ☐ sexual ☐ emotional ☐ neglect ☐ factitious or induced illness

Clinical setting: Safeguarding concerns as part of acute presentation ☐ Child protection medical ☐ MDT meeting ☐

Case conference ☐ Other (specify):

Please insert a brief summary of the case and the reasons why safeguarding concerns were raised:

Trainee to complete in advance at the time of ordering assessment

What was your role in eliciting/managing these concerns? (Observer; responsible for admission; discussing/making referral to children's social care; presenting case in social concerns meeting; interviewed parents; examined child)

Trainee to complete in advance at the time of ordering assessment

Adapted from Royal College of Paediatrics and Child Health

Areas for development and agreed learning objectives:

Possible questions for discussion	Comments
♦ How did the child behave and interact with their parents and other adults? ♦ What are the risks to the child and the protective factors in the child's life? ♦ What were the key elements of the referral to children's social care? ♦ What agencies were involved? What role did they play? Comment on the communication between different agencies. ♦ What other interventions would be useful for this child? ♦ Had there been any missed opportunities to intervene? ♦ What was the outcome? ♦ Did you find any aspects of this case difficult? How did you manage these difficulties?	

Based on this discussion is the trainee competent for their level of training with regard to childprotection work?

Yes □ **No** □

Do you have a concern?

☐ No concern ☐ Minor concern ☐ Serious concern

Please document any concerns you have about this trainee's competence and knowledge base.

In relation to **THIS CASE**, do you have any concern about this trainee's integrity, ethical, personal and professional practice or any other areas not highlighted by the questions?

☐No concern ☐Minor concern ☐Serious concern ☐Unable to judge

Please document any concerns you have about this trainee's integrity, ethical, personal and professional practiceor any other areas. Refer to Educational Supervisor if necessary.

Conjoint Program (UKM, UM, USM, UPM, UITM) Master of Paediatrics / Master of Medicine (Paediatrics)

Safeguarding Children Case Based Discussion

Please grade the area listed below using the given scale (1 -6)		Scale 1. Unsafe 2. Below expectation 3. Meets expectation 4. Above expectation 5. Well above expectation 6. Unable to comment
1. On the basis of THIS CASE, how would you rate this trainee's overall clinical care for their stage of training		
2. On the basis of THIS CASE, how would you rate this trainee's overall clinical care in relation to the standard expected at confirmation of completion of training		

Is there anything especially good you wish to comment on?			
Suggestions for development			
Agreed action			
Assessor's Name			
MMC Number		Assessor's position:	☐Consultant ☐Specialist
Time taken for discussion (in minutes):		Time taken for feedback (in minutes):	
Assessor's signature		Student's signature	

Adapted from Royal College of Paediatrics and Child Health

Appendix 7: Accredited Ministry of Health hospitals and duration of placement allowed.

	Hospital	Subspecialties	Accredited duration for training (years)	Allowable trainee placement
1	Hospital Sultanah Bahiyah, Alor Setar	Adolescent Medicine, Intensive Care	2	Year 1 and Year 2
2	Hospital Pulau Pinang	Cardiology, Developmental Paediatrics, Infectious Diseases, Intensive Care, Nephrology, Neurology, Respiratory Medicine	4	Year 1 to Year 4
3	Hospital Seberang Jaya		2	Year 1 and Year 2
4	Hospital Raja Permaisuri Bainun, Ipoh	Adolescent Medicine, Community Paediatrics, Haematology/Oncology, Infectious Diseases, Neurology	4	Year 1 and Year 2 **OR** Year 3 and Year 4
5	Hospital Kuala Lumpur	Adolescent Medicine, Cardiology, Developmental Paediatrics, Gastroenterology, Haematology/Oncology, Intensive Care, Nephrology, Neurology, Respiratory Medicine	4	Year 1 and Year 2 **OR** Year 3 and Year 4
6	Hospital Selayang	Gastroenterology, Nephrology, Rheumatology, Adolescent Medicine	4	Year 1 and Year 2
7	Hospital Serdang	Cardiology, Endocrine, Immunology, Intensive Care, Respiratory Medicine	4	Year 1 and Year 2 **OR** Year 3 and Year 4
8	Hospital Seremban	Infectious Diseases, Nephrology	2	Year 1 and Year 2
9	Hospital Melaka	Intensive Care	2	Year 1 and Year 2
10	Hospital Sultanah Aminah and Hospital Sultan Ismail, Johor Bahru	Cardiology, Haematology/Oncology, Nephrology, Neurology	4	Year 1 and Year 2 **OR** Year 3 and Year 4

11	Hospital Tengku Ampuan Afzan, Kuantan	Cardiology, Nephrology, Respiratory	2	Year 1 and Year 2
12	Hospital Terengganu	Oncology	2	Year 1 and Year 2
13	Hospital Raja Perempuan Zainab II	Cardiology, Infectious Diseases, Neurology, Respiratory	4	Year 1 and Year 2 **OR** Year 3 and Year 4
14	Hospital Umum Sarawak	Cardiology, Haematology/Oncology, Neurology, Intensive Care	4	Year 1 and Year 2 **OR** Year 3 and Year 4
15	Sabah Women's and Children's Hospital	Cardiology, Haematology/Oncology, Infectious Diseases, Intensive Care	4	Year 1 and Year 2 **OR** Year 3 and Year 4