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# Paediatric Specialty Training - New Curriculum Proposal 2023

HONG KONG COLLEGE OF PAEDIATRICIANS

WORKING GROUP ON CURRICULUM REVIEW

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(VERSION 8 MAY 2023 – AFTER 31<sup>ST</sup> WGCR MEETING)



**Paediatric Specialty Training – New Curriculum Proposal for Basic and Higher  
Training  
Working Group on Curriculum Review  
Hong Kong College of Paediatricians  
May 2023**

Version 8 May 2023 – After 31<sup>st</sup> WPCR Meeting

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# 1 - Introduction

Hong Kong College of Paediatricians published the first Guidelines on Postgraduate Training and Accreditation in 1995. Since then, the College had reviewed the training programme from time to time. The last revised guidelines were published in 2007. They were the blueprint of the first six years of paediatric training up till a trainee attains fellowship of the College.

Our College embarked on a review of the postgraduate training curriculum in Hong Kong in 2019 to bring it abreast with the global trend of designing training based on competencies. The shifting landscape of the Paediatrics, particularly the increasing number of accredited paediatric subspecialties, has a definitive and crucial impact on postgraduate training. The new curriculum would address the evolution of our specialty in the past 30 years.

The new curriculum is designed with adult learning in mind. Reference has been made to the *PROGRESS curriculum* of the Royal College of Paediatrics and Child Health, United Kingdom, and the *Hong Kong Doctors* document last updated and published by the Hong Kong Medical Council in October 2017.

## 1.1 Competency-based curriculum

At the core of the new curriculum is the concept of training based on competency. Competency encompasses a range of attitudes and skills that have always been the foundation of training. The new curriculum places emphasis on these competencies and they will direct the development of future paediatricians. They will also be the basis of assessment throughout the training journey.

## 1.2 Syllabuses

Syllabus is a range of knowledge in each and every subspecialty area that the College provides as a framework of personal learning. While a trainee is encouraged to study the topics in a syllabus, each trainee may acquire the knowledge to a variable depth and breadth, depending on one's training path. Syllabuses should not be understood as limits of knowledge required of them at summative assessments.

## **1.3 Formative and Summative Assessments**

Apart from the well-tested intermediate examination before the commencement of higher training and the exit assessment at the end, the College would introduce formative assessments based on performance at workplace. The new and internationally adopted formative assessment tools will give trainees support and direction during their acquisition of the desired competencies. The new formative tools will replace some of the older training logging practices, and the number required will be finite.



## 2. Definitions

### *Curriculum*

Curriculum is a defined set of learning outcomes and key capabilities that a trainee should achieve and acquire during the training. Illustrations are examples that help to describe what the learning outcomes and key capabilities entail.

### *Learning Outcomes (in curriculum)*

Broad statements of mandatory training results

### *Key Capabilities (in curriculum)*

Essential skill a trainee must acquire

### *Illustrations (in curriculum)*

Examples that can demonstrate the achievement of Learning Outcomes and Key Capabilities

### *Syllabus*

Syllabus is a scope of knowledge and skills that are recommended for the trainees during the period of basic and higher training. A trainee can acquire these skills to variable breadths and depths, depending on the training pathway. The syllabuses are intended as guides to learning and not as limits to scope of the two summative assessments, namely the intermediate examinations and the Exit Assessment

### *Children and Young People (CYP)*

Individuals under the age of 18 years.

### *Summative Assessment*

The intermediate examinations and the exit assessment as prescribed by the College

### *Formative Assessment*

Assessment performed during the course of training with the purpose of guiding the trainee's future development. It is usually based at the workplace.

### *General Paediatrics*

Knowledge that a fellow after a six-year training has to successfully discharge his duty as a paediatrician. It is a summation of all subspecialty knowledge, including neonatology.

### *Subspecialty*

A body of knowledge and a system of clinical practice that is traditionally recognized as distinct in the practice of Paediatrics.

### 3. Training Environment and Process

Postgraduate Paediatric training is inextricably linked to the work of the trainees. Paediatric trainees are trained in-job.

Currently the training curriculum is based mainly in hospitals. There is a six-month mandatory Community Paediatric Training during basic training at the Family Health Service and Child Assessment Service of Department of Health. A higher trainee may spend up to 12 months in one subspecialty, which may be counted as the overlap year of training in an accredited subspecialty. A maximum of six months of clinical research can also be included in the higher training period.

There are two summative assessments, namely the intermediate examination and the exit assessment. A trainee need to pass the intermediate examination, which is now the MRCPCH examinations jointly held by the College and the Royal College of Paediatrics and Child Health of United Kingdom, before one can advance to the higher training. At the end of higher training, a trainee need to undergo an exit assessment before one can be promoted to fellowship status. Two dissertations are required for the exit assessment.

Formative assessments were conducted at the workplace. This new curriculum will introduce structured and standardized formative assessment tools. More tools may be introduced in future.

The Working Group envisions that the curriculum shall be applicable even if there are modifications to the training structure in the future. In fact, the curriculum will hopefully remove the obstacles to a more balanced training both at the hospital and the community.

## 4. Training the trainers

The new competency-based training curriculum emphasizes equally the professional, interpersonal skills, attitudes and the specialist knowledge. For the development of the professional values and interpersonal skills, a close trainer-trainee relationship would be necessary.

The College envisions that trainer status will be linked with achievement of competencies necessary to guide trainees through the curriculum. The training will introduce important educational concepts such as adult learning (andragogy) and feedback literacy, and provide guidance on how to use the formative assessments tools in the workplace.

## 5. The Curriculum Review Engagement Process

The Working Group met regularly to discuss and draft proposals of the curriculum statement, the formative assessment tools and the syllabuses. All fellows, members and associates were consulted in three phases on these different proposals via a consultation website [hkpaedcr.paediatrician.org.hk](http://hkpaedcr.paediatrician.org.hk). The Working Group has also consulted all the local professional bodies on the twenty-two syllabuses, including sister colleges of the the Academy, professional societies, study groups and subspecialty boards. Feedback are deliberated and incorporated into the proposal as appropriate.

The Working Group had conducted several open talks and seminars. The first was a dedicated symposium to paediatric training at the College's 30<sup>th</sup> Anniversary Scientific Meeting in 2021 with speeches by Dr Jonathan Darling of RCPCH, Professor Hui-Kim Yap of National Singapore University and Professor Lee Beers MD of AAP. A special talk by the RCPCH's Vice President for Training and Assessment, Dr Kathryn Chadwick, was held in September 2022, quickly followed by a Paediatric Update Seminar on 3 December 2022, during which Dr Alison Steele, Officer for Safeguarding, RCPCH, and Dr Camilla Kingdon, President of RCPCH gave two keynote lectures on paediatrics training.

## **6. Acknowledgement**

The Working Group would like to thank all fellows, members and associates who have expressed their opinions at the consultations.

## 7. Curriculum Statement

The Curriculum Statement has taken reference from the PROGRESS curriculum of the RCPCH and the Hong Kong Doctors document (October 2017) published by the Medical Council of Hong Kong. There are eleven domains in the statement. Each domain is mapped to the competencies listed by *Hong Kong Doctors (2017)* document wherever possible.

There are three columns in each domain, namely:

<i>Learning Outcomes</i>	<i>Key Capabilities</i>	<i>Illustrations</i>
Broad statements of mandatory training results	Essential skill a trainee must acquire	Examples that can demonstrate the achievement of Learning Outcomes and Key Capabilities

There are two levels in each domain. One for basic training, and one for higher training. A trainee is required to demonstrate the learning outcomes and key capabilities satisfactorily during the corresponding training level.

There are a total of 11 domains:

1. Professional values and behaviours
2. Communications
3. Procedures
4. Patient management
5. Health promotion and Illness prevention
6. Leadership and Team working
7. Patient safety and safe prescribing
8. Quality improvement
9. Safeguarding
10. Education and Training
11. Research

## 7.1. Domain 1 - Professional Values & Behaviour

HK Doctors Core Competences mapped to this domain:

**Integration of basic, social and clinical sciences into the clinical context** - Medical graduates should be competent in integrating the current knowledge in basic, social and clinical sciences and applying the knowledge to recognize, explain and manage health problems of patients.

**Attitude and Professionalism** - Medical graduates should be able to demonstrate an appropriate professional attitude and uphold important tenets of professionalism. These include altruism, accountability and responsibility, commitment to excellence and service, honour and integrity, respect for others, and adherence to standards of professional behaviour including appropriate attire and use of professional language.

**Ethical understanding and legal responsibilities** - Medical graduates should be able to grasp the ethical principles and to understand the legal responsibilities in the practice of medicine.

## Domain 1 - Professional Values & Behaviour

### Basic Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Be committed to excellence, service, honour, integrity and respect of others.</li> <li>2. Take the interest and welfare of children as the first and most important consideration.</li> <li>3. Apply the knowledge of growth and development in the holistic care of Children and Young Persons (CYP).</li> <li>4. Demonstrate insight and recognize the limits of their capabilities in common emergency and non-emergency paediatric conditions.</li> </ol>	<ol style="list-style-type: none"> <li>1. Act with altruism, accountability and responsibility.</li> <li>2. Respect the autonomy of CYP and their families in making informed decisions about medical care and assess their competence in doing so</li> <li>3. Foster constructive working relationships with healthcare professionals, CYP and their families taking into account of the effect of different cultural and religious backgrounds on patient care</li> <li>4. Reflect on one's own work</li> </ol>	<ol style="list-style-type: none"> <li>1. Recognize and manage common pediatric emergency and non-emergency conditions,</li> <li>2. Explain management plans to CYP and families, involving them in decision making</li> <li>3. Obtain consent for common procedures by explaining the procedure, benefits, risks and potential complications</li> <li>4. Demonstrate the understanding of how the developing physiology, anatomy and psychology affect the care of CYP.</li> <li>5. Assess psychological and mental issues of CYP and refer to appropriate health professionals</li> <li>6. Seek help and advice from seniors and colleagues when encountering difficulty in patient management</li> <li>7. Make appropriate referrals to healthcare professionals for assessment and treatment</li> <li>8. Understand the importance of confidentiality in patient care.</li> </ol>

# Domain 1 - Professional Values & Behaviour

## Higher Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Act in a way that is safe, appropriate and does no harm to the patients when handling a broad range of common paediatric conditions and emergencies as an independent clinician</li> <li>2. Act as an example to junior colleagues in upholding professional and personal integrity</li> </ol>	<ol style="list-style-type: none"> <li>1. Apply knowledge of the principle of medical ethics and current local legislation related to the care of children and families</li> <li>2. Manage more difficult clinical conditions and complex situations, seeking help when appropriate.</li> </ol>	<ol style="list-style-type: none"> <li>1. Apply management guidelines in daily work when appropriate</li> <li>2. Research for legal and ethical guidelines to support their work</li> <li>3. Understand the local legislation regarding the welfare of CYP.</li> <li>4. Understand medical ethics pertaining to palliative care, end-of-life care and resolve situations where the beliefs of the CYP or the family may affect patient care.</li> <li>5. Advise junior colleagues when making difficult decisions and handling patient complaints</li> </ol>

## 7.2. Domain 2 - Communication

HK Doctors Core Competences mapped to this domain:

**Communication** - Good communication skills underpin all aspects of the practice of medicine and medical graduates should be able to demonstrate effective verbal, non-verbal, written and electronic communication skills.

**Medical informatics** - Medical graduates should be competent in collecting, storing and using clinical data (from simple record-keeping to accessing and using computer-based data) and incorporate the use of health information technology in the day-to-day care of patients.

## Domain 2 - Communication

### Basic Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Build and maintain functional relationships with CYP under one's care through effective communication</li> <li>2. Engage in effective bi-directional verbal, non-verbal and written communication with CYP, their families, professionals and agencies in an accurate and respectful manner</li> </ol>	<ol style="list-style-type: none"> <li>1. Develop effective listening skills with social and cultural awareness and sensitivity.</li> <li>2. Keep good and accurate medical records.</li> <li>3. Hand over the care of patients through effective communication.</li> <li>4. Facilitate shared decision making with patients, families and carers.</li> <li>5. Take part in a multi-disciplinary team as a constructive member.</li> </ol>	<ol style="list-style-type: none"> <li>1. Conduct out-patient clinical consultations and in-patient admissions by gathering and giving important and relevant information.</li> <li>2. Document clearly the history, physical findings, decision making process and communication in the medical records</li> <li>3. Write clear and effective medical reports, referral and reply letters.</li> <li>4. Handover patient care effectively through different means of communication.</li> <li>5. Participates effectively in MDT and engages with patients and families/carers, facilitating shared decision-making.</li> <li>6. Uses information technology effectively in daily practice</li> <li>7. Conduct effective interviews with CYP and families by empathetic listening and encouraging expression of the CYP and family.</li> </ol>

## Domain 2 - Communication

### Higher Training

Learning Outcome	Key Capabilities	Illustrations
<p>1. Apply effective communication skills in difficult settings, including handling complaints, patient interactions involving litigation, advance care plan and end-of-life management</p>	<p>1. Author legal documents and child protection reports</p> <p>2. Foster team work approach and take a leading role in a MDT</p> <p>3. Demonstrate to others how to manage an effective consultation, including communicating a diagnosis and prognosis effectively to children, young people and families</p>	<p>1. Create accurate and informative written pamphlets or information in a language suitable for the recipients for the purpose of obtaining consent or explaining the management plan.</p> <p>2. Makes appropriate referrals to statutory and voluntary agencies that provide support to CYP and their families</p> <p>3. Write legal documents and child protection reports.</p> <p>4. Handle delicate communication, like breaking bad news, discussion of end-of-life care, with sensitivity and respect.</p>

### 7.3. Domain 3 - Procedures

HK Doctors Core Competence mapped to this domain:

**Clinical procedures** - Medical graduates should be able to master a range of basic clinical procedures independently (more advanced skills are expected of a paediatric trainee)

## Domain 3 - Procedures

### Basic Training

Learning Outcome	Key Capabilities	Illustrations
<p>1. Carry out clinical examinations with appropriate adaptations for CYP of different growth and developmental stages.</p> <p>2. Carry out basic clinical procedures with appropriate adaptation and troubleshooting for CYP under a range of situations</p>	<p>1. Perform basic and advanced paediatric life support and neonatal resuscitation.</p> <p>2. Recognize and take prompt and appropriate procedures when the child's well-being, safety, dignity or comfort is being compromised.</p> <p>3. Perform developmental assessment of CYP and appreciate normal variations in growth and development</p> <p>4. Perform the following essential procedures:</p> <p>Infection control measure  Aseptic technique  Administration of sedation  Blood taking techniques, including heel prick  Various injection techniques  Peripheral venous cannulation  Peripheral Arterial cannulation  Umbilical venous cannulation  Umbilical arterial cannulation  Intraosseous needle insertion  Lumbar puncture  Measuring peak flow rate  Advanced airway support, including tracheal intubation, replacing tracheostomy tube and bagging  Microbiological study specimen collection  Bladder catheterization  ECG performance and interpretation  Use of Epinephrine auto-injector  Chest tap and chest tube insertion  Nasogastric tube insertion  Use of Automated external defibrillator  Red Reflex examination</p>	<p>1. Take care to ensure the dignity and comfort of CYP when performing clinical procedures</p> <p>2. Explain the indication, side effect and possible complications of common procedures to the CYP and family</p>

## Domain 3 - Procedures

### Higher Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Supervise and assess junior staff undertaking clinical procedures, and manage complications arising from the procedures.</li> <li>2. Demonstrate competence in performing independently a wider range of advanced procedural skills that are required in the practice of paediatrics and their chosen subspecialties.</li> <li>3. Recognize the situation that requires the advanced or specialized skills of other health professionals and to employ their skills.</li> </ol>	<ol style="list-style-type: none"> <li>1. Perform the following essential procedures during higher training:  Exchange transfusion Point-of-care Ultrasound (e.g. head ultrasound examination, ultrasound guided vascular cannulation) – <i>the use of ultrasound as a modality of examination or guidance of clinical procedure instead of the specific ultrasound procedure.</i></li> </ol>	<ol style="list-style-type: none"> <li>1. Supervise junior staff in essential clinical procedures with appropriate guidance and teaching.</li> <li>2. Decide alternative strategy when the procedures are contraindicated or refused.</li> </ol>

## 7.4. Domain 4 - Patient Management

HK Doctors Core Competences mapped to this domain:

**Clinical skills** - Medical graduates should be competent in carrying out a range of clinical skills (e.g. history taking, physical and mental state examination, problem solving skill, making a diagnosis, etc.) independently and to an acceptable standard.

**Patient investigation** - Medical graduates should be able to demonstrate competence in the general principles of patient investigation and to undertake appropriate investigative procedures by themselves.

**Patient management** - Medical graduates are expected to have demonstrable knowledge of the important aspects of patient management and to make appropriate referrals

**Decision making skills and clinical reasoning and judgment** - Medical graduates should be able to develop decision making skills and display clinical reasoning based on medical evidence and humane judgment as basis for their actions.

## Domain 4 - Patient Management

### Basic Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Perform comprehensive history taking, physical examination and investigations and give due consideration of personal factors of the CYP</li> <li>2. Devise a safe management plan of common paediatric problems at hospital and community settings based on knowledge and sound clinical reasoning</li> <li>3. Refine differential diagnosis and tailor management plans in response to the patient's needs and clinical progress</li> </ol>	<ol style="list-style-type: none"> <li>1. Recognize emergency and serious situations of physical and mental health in CYP and intervene appropriately</li> <li>2. Apply local and international guidelines in the management of common paediatric problems</li> <li>3. Adapt the best evidence-based clinical practice for paediatric problems if guideline is lacking</li> </ol>	<ol style="list-style-type: none"> <li>1. Demonstrate the accurate formulation of problems, recognizing the breadth of different presentations of disorders.</li> <li>2. Present and discuss patient management in a team to demonstrate understanding of the patient's situation</li> <li>3. Interpret common laboratory and radiological findings and explain them to the parents.</li> <li>4. Diagnose and manage the common important causes of mortality and morbidity in CYP, for instance, common airway and respiratory emergencies, shock, status epilepticus and cardiac arrhythmias.</li> <li>5. Recognize maltreatment of children</li> </ol>

## Domain 4 - Patient Management

### Higher Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Recognize, investigate, initiate and continue the management of a wider range of acute and chronic conditions in the outpatient setting when possible</li> <li>2. Consider a wider range of treatment and management options available, including new therapies, relevant to paediatrics and their chosen subspecialties</li> <li>3. Anticipate and determine the need for transition of patient to other specialties or treatment settings, including the transition to adult care, and plan accordingly</li> </ol>	<ol style="list-style-type: none"> <li>1. Collaborate with other clinicians, specialists, allied health professionals and health-related agencies in patient management in a multidisciplinary setting</li> <li>2. Plan the return of patients with medical complexities to community and home care</li> </ol>	<ol style="list-style-type: none"> <li>1. Explain and discuss with patients and families for the process of transition to adult care. Collaborate with adult physicians and concerned health discipline to facilitate the transition.</li> <li>2. Recognize rare but important emergency conditions in various subspecialties, especially in the subspecialty of the trainee's choice.</li> <li>3. Explain the rationale to consider escalation of treatment to the family when the need arises</li> <li>4. Work with nurses and other professionals in the arrangement of home care of chronic patients.</li> </ol>

## 7.5. Domain 5 - Health Promotion & Illness Prevention

HK Doctors Core Competence mapped to this domain:

**Health promotion and disease prevention** - Medical graduates should know how to make use of every opportunity for health promotion and disease prevention

## Domain 5 - Health Promotion & Illness Prevention

### Basic Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Promote healthy lifestyle and optimal physical and mental development of CYP by giving advice and anticipatory guidance during daily clinical practice.</li> <li>2. Consider the potential impact of cultural, social, religious and economic factors on health promotion and illness prevention of CYP.</li> </ol>	<ol style="list-style-type: none"> <li>1. Promote and advise on childhood vaccination</li> <li>2. Promote and advise on breast feeding, infant and young child feeding.</li> <li>3. Promote and advise the importance of parenting in child health and development</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with parents about basic parenting skills.</li> <li>2. Educate CYP about healthy diet and exercise.</li> <li>3. Advise parents to give up smoking</li> <li>4. Arrange social and financial support to families in need.</li> <li>5. Work with school nurse in advising the care of children in special schools</li> </ol>

## Domain 5 - Health Promotion & Illness Prevention

### Higher Training

Learning Outcome	Key Capabilities	Illustrations
<p>1. To lead the promotion of health and wellbeing of CYP in different settings, including well CYP and CYP with chronic conditions.</p>	<p>1. Understand the importance of a stable family and good physical health in promoting good mental health</p> <p>2. Understand the impacts of family composition, socio-economic factors and poverty on child health</p> <p>3. Understand strategies and the implications for universal screening e.g. universal hearing screening, metabolic screening.</p>	<p>1. Counsel CYP on smoking, alcohol, recreational drugs</p> <p>2. Counsel CYP and family about accident prevention</p> <p>3. Provide sex education to young people</p> <p>4. Explain to the young person on prevention of sexually transmitted diseases and contraception.</p> <p>5. Understand how schooling and medical care can affect each other.</p> <p>6. Understand the impact of poverty on child health</p> <p>7. Understand broad global issues on child health.</p>

## 7.6. Domain 6 - Leadership & Team Working

HK Doctors Core Competences mapped to this domain:

**Roles of doctors within the healthcare system** — Medical graduates should understand the healthcare system in Hong Kong and the clinical responsibilities and role of a doctor in the society. They should also appreciate the roles of doctors as researchers, mentors, teachers and managers in the system.

**Team work** - Team work is important in the delivery of healthcare to patients, and doctors should be able to take a leading role in a multi-professional team and appreciate the roles of other healthcare workers

## Domain 6 - Leadership & Team Working

### Basic Training

Learning Outcome	Key Capabilities	Illustrations
1. Participate effectively and constructively in multidisciplinary and inter-professional teams	1. Understand the importance of leadership and team work in common clinical settings.  2. Work constructively within a team and value the contribution of team members in various disciplines and sectors.	1. Participate regularly in multidisciplinary team case conference, joint clinics etc and work effectively with other team members  2. Contribute to multidisciplinary teams and meetings in a proactive manner and delivers all work on time.  3. Take part in audit meeting and other quality improvement projects initiated by the clinical department / team  4. Guide interns, nurses and junior colleagues to work collaboratively on a daily basis.

## Domain 6 - Leadership & Team Working

### Higher Training

Learning Outcome	Key Capabilities	Illustrations
1. Demonstrate effective leadership qualities and critical decision-making skills	1. Coordinate and communicate effectively in a MDT to handle a range of situations with CYP and families in chronic disease settings and challenging circumstances.  2. Demonstrate leadership quality and decision making ability in conflicts and critical circumstances	1. Actively participate in team meetings, working groups and interdepartmental projects as an independent team member.  2. Be an effective coordinator or chairperson of case conferences, working groups and audit meetings  3. Give constructive feedback for the professional development of others  4. Takes lead in resuscitation or in drills  5. Promotes teamwork by empowering other team members through effective delegation and communication  6. Initiate and complete projects on guidelines writing or quality improvement

## **7.7. Domain 7 - Patient Safety, including Safe Prescribing**

As an overarching principle, HK Doctors document stated:

"It is the duty of the Medical Council to protect, promote and maintain the health and safety of the public by ensuring the professional standard of registered medical practitioners. A high standard of medical education is required to meet the needs of the public. Patient safety must be the overriding priority at all stages of medical education and training. A doctor practising safe medicine must also be an ethical doctor."

## Domain 7 - Patient Safety, including Safe Prescribing

### Basic Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Understand the importance of patient safety and apply its principles in child safety, namely sedation and procedural safety and injury prevention.</li> <li>2. Select and prescribe common medications safely and appropriately for CYP.</li> </ol>	<ol style="list-style-type: none"> <li>1. Apply the prevailing guidelines in drug prescription.</li> <li>2. Educate CYP on the safe use of medicine and their side effects</li> </ol>	<ol style="list-style-type: none"> <li>1. Prescribe appropriate fluid therapy for newborns to young adults</li> <li>2. Prescribing antibiotics rationally and understand antibiotics stewardship programme.</li> <li>3. Prescribing sedatives, analgesics and opioids safely</li> <li>4. Practice measures to reduce prescription and medication errors (e.g. writing legibly, avoid unconventional abbreviations)</li> <li>5. Be knowledgeable of drug interactions of commonly used drugs</li> <li>6. Uses therapeutic drug monitoring to adjust dosing schedules.</li> <li>7. Familiarize the common side effects of common prescribed drugs</li> <li>8. Prescribe medications to CYP with an understanding of the pharmacokinetics, pharmacogenetics, dose calculation and dosage adjustment in renal and liver impairment.</li> <li>9. Understand the effect of maternal drugs on infants receiving breast milk.</li> <li>10. Safely prescribe parenteral nutrition</li> </ol>

## Domain 7 - Patient Safety, including Safe Prescribing

### Higher Training

Learning Outcome	Key Capabilities	Illustrations
<p>1. Identify, report, investigate and mitigate actual and potential risks in clinical management</p>	<p>1. Perform risk reporting and participate in the investigation and mitigation using the existing mechanisms</p> <p>2. Counsel CYP and the family on the safety implications of drug compliance and handle complicated compliance issues</p>	<p>1. Demonstrate a working knowledge of risk assessment and its application</p> <p>2. Apply local policies for risk reporting.</p> <p>3. Effectively manage a complaint and learns from clinical errors.</p> <p>4. Discussion with CYP &amp; family (especially chronic disease on medications) the importance of compliance, common side effects, and way for communication once problem encountered</p> <p>5. Understand idiosyncratic drug reactions like exanthematous drug eruption associated with anti-seizure drugs and antimicrobials.</p> <p>6. Carry out investigations of medication errors</p>

## 7.8. Domain 8 - Quality Improvement

This domain can be partially mapped to the following competence of the HK Doctors document:

**Roles of doctors within the healthcare system** - Medical graduates should understand the healthcare system in Hong Kong and the clinical responsibilities and role of a doctor in the society. They should also appreciate the roles of doctors as researchers, mentors, teachers and managers in the system.

## Domain 8 - Quality Improvement

### Basic Training

Learning Outcome	Key Capabilities	Illustrations
1. Understand quality improvement principles.	<ol style="list-style-type: none"><li>1. Understand the concept of audit and CQI projects</li><li>2. Understand the concept and technique in data collection</li></ol>	<ol style="list-style-type: none"><li>1. Apply and evaluate local and national clinical guidelines and protocols in paediatric practice and public health, and recognize the individual patient needs when using them</li><li>2. Apply knowledge of how to access clinical databases and find web-based information for quality improvement</li><li>3. Handle complaints and feedbacks from CYP and families in a constructive manner</li></ol>

## Domain 8 - Quality Improvement

### Higher Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Apply knowledge of Quality Improvement to undertake projects and audits to improve clinical effectiveness, patient safety and experience under guidance.</li> <li>2. Participate in Quality Improvement projects with other healthcare professionals and facilitates reflective evaluation in relation to QI interventions under guidance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify opportunities for quality improvement</li> </ol>	<ol style="list-style-type: none"> <li>1. Execute a simple quality improvement project using improvement under guidance.</li> <li>2. Understand the process of hospital accreditation</li> <li>3. Understand the key performance indices in clinical practice of the trainee's institution.</li> </ol>

## **7.9. Domain 9 - Safeguarding**

There is no competence in Hong Kong Doctors that is directly mapped to this domain.

As child health professionals, child protection plays a role in everything we do. It is about protecting individual children identified as suffering, or likely to suffer, significant harm as a result of abuse or neglect. Safeguarding is a broader issue, and covers how we ensure children grow up in a safe environment.

## Domain 9 - Safeguarding

### Basic Training

Learning Outcome	Key Capabilities	Illustrations
<p>1. Understand and uphold the professional responsibility of safeguarding CYP</p> <p>2. Document any safeguarding concern, alert senior staff of such concern and seek advice and guidance.</p> <p>3. Understand the long term impact of child maltreatment and other adverse childhood experiences.</p>	<p>1. Recognize presenting features of children where child protection issue may be a concern.</p> <p>2. Recognize vulnerable children and distressed families that need assistance or intervention</p> <p>3. Apply knowledge on how to act in cases of suspected child maltreatment</p> <p>4. Apply knowledge of local multidisciplinary procedures for CYP in need of safeguarding support, including adoption and foster care.</p> <p>5. Document clearly and accurately all examination results, assessment and communication relating to possible safeguarding issues.</p> <p>6. Provide oral or written reports for welfare meetings, multidisciplinary case conferences and produce written reports for the police, social service or court hearings under supervision.</p> <p>7. Participate actively in multidisciplinary conference and welfare meetings</p>	<p>1. Apply knowledge to recognise the diversity of physical signs and symptoms that might indicate or mimic child abuse, including skin injury and genital warts</p> <p>2. Recognise that frequent emergency department attendance may be a presentation of child abuse and/or neglect</p> <p>3. Recognise that behaviour changes, including soiling and/or bed wetting, can be a presentation of psychological abuse or neglect.</p> <p>4. Recognise the health indicators of possible neglect, including failure to meet the child's routine health needs, school absence and severe, untreated dental caries.</p> <p>5. Identify the presenting features of possible abusive head trauma in infants and knows the conditions that might mimic such presentations (e.g. inherited metabolic disorder).</p> <p>6. Recognise the risk factors which contribute to vulnerability, including disability in children, maternal mental illness, parental substance abuse and teenage parents.</p> <p>7. Recognise the risk factors for maltreatment in the unborn child (e.g. maternal substance abuse, maternal mental illness)</p> <p>8. Apply knowledge of the principles and practice of latest local guideline in handling of case of suspected child maltreatment (e.g. Protecting children from maltreatment - procedural guide for multidisciplinary cooperation)</p> <p>9. Employ and interpret investigations in suspected child maltreatment e.g. blood tests, skeletal X ray</p>

## Domain 9 - Safeguarding

### Higher Training

Learning Outcome	Key Capabilities	Illustrations
<p>1. Lead independently the detection, assessment, reporting and decision making in the safeguarding of CYP</p>	<p>1. Handle with sensitivity the disclosure and any need to escalate action regarding case with possible safeguarding issue</p> <p>2. Follow the established guidelines and procedures in the identification, assessment, referral and follow-up of CYP who may have been sexually abused.</p> <p>3. Initiate and take part in the comprehensive multidisciplinary assessment of the developmental, physical and psychological status and the family function of CYP who have been possibly maltreated and draw up a conclusion about the nature of the case.</p> <p>4. Provide oral or written reports for welfare meetings, multidisciplinary case conferences and produce written reports for the police, social service or court hearings independently.</p> <p>5. Assess the role of a Paediatrician as it relates to those of other professionals in the management of children in need of protection and ensure suitable follow-up</p>	<p>1. Obtain valid consent for examination in the case of suspected abuse</p> <p>2. Identify the risk factors, and physical and behavioural indicators for child sexual abuse (e.g. missing from home or school and presenting with a controlling adult).</p> <p>3. Apply knowledge of the local referral pathways for child sexual abuse</p> <p>4. Respond to the safeguarding needs of the unborn child, including in families with domestic violence, or maternal substance abuse.</p> <p>5. Respond to the safeguarding needs of vulnerable children in high risk family by proper referral for support, comprehensive assessment, risk assessment and welfare planning</p> <p>6. Participate and lead in the management of children in need of protection, and uses local pathways to ensure referral and follow-up.</p> <p>7. Understand the principles of forensic examination and recognize the importance of the chain of evidence</p> <p>8. Recognise when additional expert advice is needed (e.g. radiology, orthopaedics, neurology and ophthalmology, psychiatry or clinical psychology)</p>

## 7.10. Domain 10 - Education & Training

HK Doctors Core competence that is mapped to this domain:

**Personal development and postgraduate training** - Medical graduates should have a positive attitude toward personal development and an acceptance of medical education as a life-long learning process

## Domain 10 - Education & Training

### Basic Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Conduct scheduled learning and teaching activities under guidance.</li> <li>2. Be committed to continuing medical education and professional development</li> </ol>	<ol style="list-style-type: none"> <li>1. Deliver case and topic presentations, journal clubs under guidance</li> </ol>	<ol style="list-style-type: none"> <li>1. Attend scheduled teaching sessions</li> <li>2. Attend CME Activities organized by professional societies</li> <li>3. Deliver case presentations, journal clubs, grand rounds and other presentation opportunities under supervision and guidance</li> </ol>

## Domain 10 - Education & Training

### Higher Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Deliver educational activities to junior trainees and clinical colleagues.</li> <li>2. Be committed to life-long continuing medical education and professional development beyond higher training.</li> </ol>	<ol style="list-style-type: none"> <li>1. Debrief and give feedback constructively</li> </ol>	<ol style="list-style-type: none"> <li>1. Deliver tutorials or teaching sessions to peers , interns or nurses</li> <li>2. Provide constructive feedback to trainees or peers on educational sessions</li> <li>3. Organize and prepare study projects with focused topics</li> <li>4. Take part in the debriefing after drills on resuscitation, infection control or patient transport.</li> <li>5. Provide constructive feedback to interns or junior colleagues after supervising their performance of ward procedures.</li> <li>6. Create educational pamphlets or information leaflets for education of CYP and families.</li> </ol>

## **7.11. Domain 11 - Research**

The College encourages all trainees to undertake research, an essential professional skill necessary for the advancement of the practice of Paediatrics.

## Domain 11 - Research

### Basic Training

Learning Outcome	Key Capabilities	Illustrations
1. Adopt the Evidence-based Medicine approach in Paediatric medicine	1. Perform literature search 2. Critically appraise published studies under guidance 3. Apply basic statistical concepts in appraising published data	1. Performing literature search for a specific disease or condition using the appropriate search engines and resources. 2. Critically appraise published studies. 3. Be knowledgeable of the basic medical statistical methods to interpret clinical studies meaningfully. 4. Select and present important contemporaneous studies and research during a journal club. 5. Understand the strengths and weakness of different study methodologies.

## Domain 11 - Research

### Higher Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Apply the principle of evidence based medicine in clinical decision making process</li> <li>2. Generate evidence to address a paediatric problem</li> </ol>	<ol style="list-style-type: none"> <li>1. Complete a project that generates evidence (e.g. research, clinical audit).</li> </ol>	<ol style="list-style-type: none"> <li>1. Conduct projects, including clinical audit and guidelines development that improves the clinical practice within a department or an organization.</li> <li>2. Apply basic research methodology to complete case reports, retrospective case series or clinical studies that gives new insight in the context of existing body of medical literature.</li> <li>3. Demonstrate how published research findings can be applied to influence patient management practices</li> <li>4. Understand basic principles in epidemiological studies</li> </ol>

## 8. Syllabuses

There are twenty-two syllabuses in this document. They cover the scopes of knowledge that a general paediatrician shall equip oneself with as best one can. These syllabuses form the body of “General Paediatrics”.

The Working Group emphasizes that the acquisition of the knowledge listed in these syllabus is understandably variable trainee to trainee, depending on the individual training trajectory of each person. Hence, the knowledge listed herein can be learned to variable breadths and depths. These syllabuses are guiding reference, not the limits to or minimum requirement of what a trainee learns during the period of basic and higher training. They should not be construed as examination standards.

The length of each syllabus has no implication to its importance in training. An all-round paediatrician should have a reasonable body of learning to deal with the daily patients.

The syllabuses are listed in alphabetical order. They are:

1. Adolescent Medicine
2. Cardiology
3. Community Paediatrics
4. Dermatology
5. Developmental - Behavioural Paediatrics
6. Ear, nose & throat
7. Emergency Paediatrics
8. Endocrinology
9. Gastroenterology, Hepatology and Nutrition
10. Genetics and Genomics
11. Haematology and Oncology
12. Immunology, Allergy and Infectious diseases
13. Intensive Care
14. Mental Health
15. Metabolic medicine
16. Neonatology
17. Nephrology
18. Neurology
19. Ophthalmology
20. Palliative Care
21. Respiratory Medicine
22. Rheumatology

## 8.1. Adolescent Medicine

### BASIC TRAINING

TOPICS	SUBTOPICS
Definition and Epidemiology of Adolescent Health	<p>Definition of adolescence</p> <p>Statistics and epidemiology of adolescent health</p> <p>Determinants of youth health</p>
Physical and psychological changes of adolescence	<p>Physical, emotional, intellectual &amp; social influences on adolescent development</p> <p>Distinguish the specific and changing health care needs of adolescents from those of children and adults.</p> <p>Growth and pubertal problems</p> <p>Nutritional requirements of adolescents</p> <p>Overweight and obesity</p>
Abusive substances	<p>Mode of action of the substances and their physiological consequences</p> <p>Causes and prevention of health compromising and risk behaviors - smoking, drug and alcohol abuse</p>
Sexual health	<p>Distinction between gender identity and sexual orientation</p> <p>Basic principles of sex education</p> <p>Teenage pregnancy - risk factors and implications</p> <p>Common sexually transmitted diseases</p>
Adolescent Gynaecology	<p>Dysfunctional uterine bleeding</p> <p>Dysmenorrhea</p> <p>Polycystic ovarian syndrome</p>
Developmental conditions including eating disorders	<p>Understand educational and vocational needs</p> <p>Learning disabilities in adolescents</p> <p>Eating disorders - clinical presentation, multidisciplinary management</p>
Mental health	<p>Early signs of depression, anxiety, psychosis and suicidal tendency</p> <p>Red flags to refer to mental health specialists</p>
Safeguarding	<p>Adolescent violence and abuse</p> <p>Self-harm</p> <p>Date violence</p>
Chronic illnesses and common clinical conditions	<p>Understand &amp; effectively communicate to address drug adherence</p> <p>Chronic pains including migraine, tension headache, back and leg pains</p> <p>Chronic fatigue syndrome</p> <p>Psychosocial impacts of chronic illnesses</p>
Transition of adolescence to adulthood	<p>Understand the crucial importance of a successful transitional care programme</p>

<p>Desirable skills</p> <ul style="list-style-type: none"> <li>Basic Counselling skills</li> <li>Use of HEADSS tool for a psychosocial history</li> <li>Understanding of the limits of confidentiality</li> <li>Pubertal assessment using the Tanner’s staging method</li> </ul>
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**HIGHER TRAINING**

TOPICS	SUBTOPICS
Epidemiology	Local resources providing medical, educational, vocational, social and mental health services for adolescents
Physical and psychological changes of adolescence	Growth, puberty and nutritional problems in adolescence
Abusive Substances	Anticipatory guidance on health-compromising behaviours Multidisciplinary abstinence programme
Sexual health	Treatment of common STDs Counseling techniques on relationship issues and safe sex practices Emergency contraception
Developmental conditions including eating disorders	Perform initial assessment of common developmental condition with respect to school adjustment, peers, self-image and autonomy Parental styles and parenting issues Impacts of chronic illness, disability, death and dying on adolescent development Management of ADHD in adolescents
Mental health	Basic management strategy of common mental health disorders
Safeguarding	Need of disclosure and the right of confidentiality
Chronic illnesses and common clinical conditions	Acne - management Manage treatment compliance issues with involvement of the adolescent in the treatment process Palliative care of Adolescents
Transition of young person to adult services	Principle and planning of transitional care
<p>Desirable skills</p> <ul style="list-style-type: none"> <li>Different communication styles in the process of advocating for adolescent health with adolescents and other professionals.</li> <li>Motivational interviewing.</li> </ul>	

## 8.2. Cardiology

### BASIC TRAINING

TOPICS	SUBTOPICS
Heart Failure	<p>Pathophysiology of heart failure</p> <p>Clinical manifestation and recognition</p> <p>Pharmacology of diuretics and anti-failure medications</p>
Heart murmur	<p>Differentiating pathological murmurs</p> <p>Formulate differential diagnoses based on murmur characteristics</p> <p>Common forms of innocent murmur</p>
Chest pain	<p>Differentiating cardiac chest pain</p> <p>Role and limitations of ECG, cardiac enzymes and treadmill testing</p>
Palpitations, syncope and arrhythmias	<p>Approach to palpitations</p> <p>Approach to diagnosis and management of vasovagal syncope</p> <p>Common causes of syncope and recognising red flags</p> <p>ECG interpretation and recognition of significant arrhythmias (e.g. SVT, VT, VF, heart block) and channelopathies (e.g. long QT)</p> <p>Acute management of SVT, VT, VF and symptomatic bradyarrhythmias</p> <p>Diagnostic and therapeutic use of adenosine/ATP</p> <p>DC cardioversion and defibrillation</p>
ECG interpretation	<p>Interpreting paediatric ECG with knowledge of normal findings of different age groups</p> <p>Common ECG variants</p> <p>Ectopic beats, neonatal bradycardia</p> <p>Artifacts</p> <p>Significant arrhythmias</p> <p>SVT</p> <p>VT</p> <p>VF</p> <p>Heart block</p> <p>Long QT syndromes</p>
Acyanotic congenital heart disease	<p>The haemodynamics, clinical, radiographic and ECG features, complications and natural history of congenital heart diseases with:</p> <p>Left-to-right shunt</p> <p>Valvular stenosis</p> <p>Valvular regurgitation</p>
Duct dependent lesions and cyanotic heart diseases	<p>Approach to a cyanotic or collapsed newborn</p> <p>The haemodynamics and clinical features of congenital heart diseases with:</p>

	<p>Right-to-left shunt, including tetralogy of Fallot</p> <p>Common mixing and transposition of great arteries</p> <p>Duct dependent systemic circulation, including coarctation of aorta</p> <p>Duct dependent pulmonary circulation, including critical PS/atresia</p> <p>Pharmacology and monitoring of medications used to maintain ductal patency</p> <p>Differentiating non-cardiac causes of a cyanotic newborn (e.g. PPHN, respiratory causes)</p>
Coronary artery disease and Kawasaki disease	<p>Clinical manifestation of Kawasaki disease</p> <p>Treatment of Kawasaki disease</p> <p>Investigations, particularly the coronary complications</p> <p>Risk factors for coronary artery disease in KD</p> <p>Lifestyle measures to improve coronary health</p>
Pericardial Diseases and Myocarditis	<p>Clinical manifestations, initial investigations, initial management and indications for referral of</p> <p>Pericarditis</p> <p>Myocarditis</p> <p>Pericardial effusion and cardiac tamponade</p>
Acquired valvular diseases	<p>Clinical features and indications for referral for:</p> <p>Rheumatic fever</p> <p>Infective endocarditis</p>
Cardiovascular manifestation of systemic and genetic disorders	<p>Cardiac involvement in common genetic disorders (e.g. Down, Turner, Noonan, Marfan, Williams and DiGeorge syndrome).</p>
Cardiomyopathy	<p>The presentation of hypertrophic and dilated cardiomyopathy</p>

### HIGHER TRAINING

TOPICS	SUBTOPICS
Heart Failure	<p>Nutritional and feeding support</p> <p>Pharmacological treatment of chronic heart failure, drug interactions, monitoring and follow up</p> <p>Management of acute heart failure</p> <p>Pharmacology of inotropes</p> <p>The indications for referral for mechanical circulatory support (e.g. ECMO)</p>
Heart murmur	<p>Investigations for heart murmurs and determining urgency of cardiology referral</p> <p>Approach to murmur during acute or systemic illnesses</p>
Congenital heart disease	<p>Interpreting echocardiogram reports and associating them with clinical, radiographic and ECG features</p> <p>The indications for treatment and urgency of cardiology referral for congenital heart diseases</p> <p>Stabilisation of the cyanotic or collapsed newborn and subsequent transport</p> <p>Acute management of a hypercyanotic spell</p>

	<p>Acute management of a pulmonary hypertensive crisis</p> <p>Understanding the expansion of adult congenital heart disease and long term issues before they can be transitioned</p>
Arrhythmias	<p>Understanding ambulatory ECG and treadmill ECG reports</p> <p>Approach to common ECG variants and abnormalities (e.g. ectopic beats, neonatal bradycardia, artefacts)</p> <p>Pharmacology of common anti-arrhythmics (e.g. beta-blocker) and monitoring</p> <p>Indications for cardiology referral for arrhythmias, including those who may benefit from electrophysiology studies and ablation.</p> <p>Medication and exercise precautions in patients at risk of arrhythmias and sudden cardiac death (e.g. long QT syndrome)</p>
Coronary artery disease and Kawasaki disease	<p>Acute complications of Kawasaki disease (e.g. KD shock syndrome, macrophage activation syndrome)</p> <p>Recognition of refractory Kawasaki disease</p>
Acquired valvular diseases	<p>Management of infective endocarditis</p> <p>Counseling regarding endocarditis prevention and dental hygiene</p>
Cardiovascular manifestation of systemic and genetic diseases	<p>The cardiac involvement and indications for cardiology referral in:</p> <p>Syndromes with multi-organ involvement (e.g. VACTERL, Alagille, Duchenne muscular dystrophy)</p> <p>Inborn errors of metabolism</p> <p>Anorexia nervosa</p> <p>Rheumatological diseases</p>
Cardiomyopathy	<p>Initial management in an acute DCM or HCM decompensation</p> <p>Risk factors of secondary cardiomyopathies (e.g. anthracycline toxicity in oncology patients, thalassaemia with iron overload)</p>
Cardiovascular genetics	<p>Indications for genetic referral in syndromic cardiac diseases, cardiomyopathies and channelopathies</p> <p>Interpret reports from genetic services and incorporate them in the overall management of the patient</p>
Desirable skills	<p>Bedside functional echocardiogram to assess cardiac function, chamber sizes and pericardial effusions.</p>

## 8.3. Community Paediatrics

### Basic Training

Topics	Subtopics
Child Public Health	Key determinants of child health and well-being (including indices of social deprivation) Levels of disease prevention: primary; secondary; tertiary
Care of the well child	Examination of the well baby Health check-ups for healthy children and adolescents The local service organization for primary paediatric health
Childhood Immunisation	The Hong Kong Childhood Immunisation Programme
Breastfeeding	Ways to protect, promote and support breastfeeding Baby-Friendly practices at hospital and community The International Code of Marketing of Breastmilk Substitutes, Hong Kong Code of Marketing of Formula Milk and Related Products, and Food Products for Infants & Young Children
Growth and Nutrition	Normal growth patterns and nutritional requirement The basis of a balanced diet, exercise and a healthy lifestyle
Child Protection/Safeguarding	Patterns of injury that are highly suggestive of non-accidental injury Shaken baby syndrome
Behavioural Paediatrics	Risk and protective factors that may affect a child's behaviour Effective parenting practices to prevent or manage common childhood behavioural problems Positive Parenting
Social Paediatrics	Social and environmental factors affecting health including poverty, children in care, influence of the mass media, health care policies Global child health issues including exploitation, child labour, child protection, war and growing up in low-income countries United Nations Convention on the Rights of the Child (UNCRC)
Desirable skills: Assess feeding adequacy and manage common breastfeeding and feeding problems	

### Higher Training

Topics	Subtopics
Behavioural Paediatrics	Screening for, assess and manage children with risk factors that may affect the behaviour of a child Impact of acute and chronic illnesses (including developmental difficulties) on child behaviour and family functioning
Child Protection/ Safeguarding	Local multidisciplinary procedures for CYP in need of safeguarding support, including adoption and foster care. Long term sequelae in victims of child maltreatment

Desirable skills:

Being a child advocate

Deliver community child health promotion

## 8.4. Dermatology

### Basic Training

Topics	Subtopics
Basic Science of Skin	The structure and function of normal skin
Examination of skin	<p>Definitions of primary lesions: macule, papule, plaque, nodule, wheal, vesicle, bulla, cyst, pustule</p> <p>Definitions of Secondary Changes: erosion, oozing, crusting, scaling, atrophy, excoriation, fissure</p> <p>Systemic description of skin lesions: primary lesion, size, secondary changes, colour, arrangement, distribution</p> <p>Skin lesions which suggest child maltreatment</p>
Basic pharmacology	<p>Different formulations of topical therapy: gel, lotion, cream, ointment</p> <p>Classification of topical steroids of different potency and their uses</p> <p>Common systemic therapies and their side effects (oral retinoid, cyclosporin, methotrexate, Mycophenolate mofetil)</p>
Common skin conditions	<p>Nevus, Warts, Scars</p> <p>Common bacterial, viral and fungal infections</p> <p>Common infestation – scabies, head lice</p>
Dermatological Emergency	<p>Erythema multiforme, Stevens-Johnson syndrome, toxic epidermal necrolysis,</p> <p>Staphylococcal Scald Skin Syndrome</p> <p>Angio-oedema and anaphylaxis</p>
Neonatal conditions	<p>Milia, sebaceous gland hyperplasia, erythema toxicum, salmon patch, nevus sebaceous and their management</p> <p>Common birth marks and Mongolian blue spots</p> <p>Management of nappy rash and cradle cap</p>
Atopic dermatitis	<p>Physical, developmental and psychological impact of atopic dermatitis on patients and families, effect on schooling, employment and quality of life</p> <p>General skin care</p> <p>Range of topic therapists for acute and chronic atopic dermatitis</p> <p>Safe use of topical treatment according to age and body sites</p> <p>Management of secondary bacterial and viral infections</p>
Infantile Haemangioma	<p>Clinical features and natural history of infantile haemangioma</p> <p>Indications for the use of topical and oral beta-blockers, and their side effects</p>
Desirable Skill	Skin scraping for fungal culture

## Higher Training

Atopic Dermatitis	The multidisciplinary approach to management of severely atopic patients with eczema, asthma, rhinitis and food allergies, and when to refer Systemic treatments - indications, side effects and safety monitoring
Acne	Infantile and childhood acne and features to suspect underlying endocrine problems Common topical therapy for acne
Scalp/hair	Seborrheic dermatitis, tinea capitis, alopecia areata, traction alopecia
Nail	Twenty nail dystrophy Onychomycosis
Urticaria	Acute and chronic idiopathic urticaria
Desirable skills Application of Teledermatology	

## 8.5. Developmental Behavioural Paediatrics

### BASIC TRAINING

TOPICS	SUBTOPICS
Normal child development	Developmental domains and trajectories Normal variations of child development
Common developmental problems in childhood Global developmental delay / Intellectual Disability Language difficulties / disorder Autism spectrum disorder Attention deficit hyperactivity disorder and problems Anxiety problems Dyslexia / at risk of dyslexia Physical impairment e.g. cerebral palsy Hearing impairment Visual impairment Acquired brain injury and acquired cognitive impairment	Neurological and genetic basis of developmental disorders Risk and protective factors Clinical signs and diagnostic criteria Genetic and environmental factors Concept of “Early identification and intervention” Management of the common disorders
Developmental assessment	Developmental screening including hearing and vision screening, and neurodevelopmental examination
Rehabilitation services in Hong Kong	Rehabilitative Service available for children with physical disability, visual or hearing impairment, autism and developmental delay

### HIGHER TRAINING

TOPICS	SUBTOPICS
Common developmental problems in childhood	Differential diagnosis and comorbid conditions of common developmental problems  The international classification of functioning, Disability and Health (ICF WHO) in relation to the common developmental problems
Developmental assessment	Developmental assessment tools that are employed locally and their interpretation
Rehabilitation services and Special Education in Hong Kong	The Education available in Hong Kong for children with Special Educational Needs Special pre-school education and Outreach Paediatric Rehabilitative Service Principle of rehabilitation planning
Desirable skills Standardized developmental assessment tools e.g. HKCASP, GDS-C Parental counselling on common developmental problems and fostering child development	

## 8.6. Ear, Nose and Throat

### BASIC TRAINING

TOPICS	SUBTOPICS
Anatomical abnormality of the ear	Anomalies of the pinna, including microtia, anotia, accessory auricles, preauricular sinus, aural atresia and malformations of the middle ear Characteristic ear appearance in certain syndromes and its association with other anomalies
Hearing impairment	Universal Neonatal Hearing Screening (UNHS) - care pathway and management Common causes and classification of hearing impairment
Infection of the ear	Clinical features and management of otitis externa, acute otitis media and otitis media with effusion
Inflammation / Infection of the upper airway	Differentiation of croup and acute epiglottitis Emergency management of upper airway obstruction
Inflammation / Infection of the throat	Clinical features and common management of acute pharyngitis and tonsillitis The association with acute rheumatic fever, post-streptococcal glomerulonephritis and infectious mononucleosis
Epistaxis	Evaluation and common management of epistaxis
Rhinitis	Allergic rhinitis Vasomotor rhinitis Common management including use of topical nasal medications
Orofacial cleft anomalies	Cleft palate and associated feeding / speech problems and middle ear infection Multidisciplinary management approach
Desirable skills Use of otoscope Use of nasal speculum Interpretation of brainstem auditory evoked potential and pure tone audiometry	

### HIGHER TRAINING

TOPICS	SUBTOPICS
Syndromes associated with ENT malformation	The effect on airway patency and feeding in conditions such as Pierre Robin sequence, Treacher Collins syndrome
Hearing impairment	Genetic causes of hearing impairment The role of hearing aids and cochlear implants
Vertigo	Diagnosis and management of benign paroxysmal positional vertigo Differentiate vertigo from dizziness
Obstructive sleep apnoea and snoring	The role of tonsillectomy in the management of OSAS

## 8.7. Emergency Paediatrics

### BASIC TRAINING

TOPICS	SUBTOPICS
Emergency room paediatrics	Resuscitation of a critically ill child Assessment of a febrile child Assessment and management of a seizing child Body weight estimation and appropriate paediatric emergency drug dosing Common emergencies encountered in various subspecialties (see various subspecialties)
Minor trauma, wounds and burns	Assessment and first-aid of bruises, simple wounds and minor burns and indications for surgical referral Indications for tetanus prophylaxis Management of minor head injuries, including indications for neuroimaging
Toxicology	General approach to drug overdose Management of paracetamol poisoning
Orthopaedic problems	Approach to a limping child Recognising radiographic features of fractures
Desirable skills Procedural analgesia Use of Broselow tape	

### HIGHER TRAINING

TOPICS	SUBTOPICS
Emergency room paediatrics	Foreign bodies in ear, nose and throat Indications for PICU support and facilitate transfer Intra-hospital and inter-hospital transfer of a critically ill child Risk assessment of Brief resolved unexplained event (BRUE) The risk factors of sudden expected death in infancy
Minor trauma, wounds and burns	Management of extravasation injuries Recognition and management of non-accidental injuries
Toxicology	Overdosage of anti-depressants, anti-psychotics, sedative Important life-threatening medications and poisons at small dosages in small children: tricyclic antidepressants, anti-arrhythmic drugs, opioids, clozapine, antimalarials, beta blockers, calcium channel blockers, theophylline, oral hypoglycaemics
Orthopaedic problems	Characteristics of fractures that are suggestive of child abuse Differentiating pathological fractures and initiating appropriate workup and referrals
Ophthalmological problems	Acute red eye Acute conjunctivitis

	Periorbital and orbital cellulitis
Desirable skills	
Wound management including local anaesthetics administration, irrigation and simple sutures	
Rapid sequence induction and emergency intubation in children population (may be acquired during PICU training)	

## 8.8. Endocrinology

### BASIC TRAINING

TOPICS	SUBTOPICS
Common growth disorders	<p>Measurement of height, weight, body proportions and head circumference.</p> <p>Utilization of growth charts and be familiar with the use of local growth standards.</p> <p>Utilization of condition-specific growth charts in children with conditions like Down' s syndrome and Turner' s syndrome</p> <p>Definition of normal and abnormal growth for local children</p> <p>General approach and initial management of:</p> <ul style="list-style-type: none"> <li>Short stature</li> <li>Tall stature</li> <li>Failure to thrive</li> <li>Obesity</li> </ul> <p>Epidemiology of obesity</p>
Common pubertal disorders	<p>Assessment of pubertal development</p> <p>Definition of normal and abnormal puberty for local children</p> <p>General approach and initial management of:</p> <ul style="list-style-type: none"> <li>Precocious/delayed puberty</li> <li>Thelarche/adrenarche</li> </ul> <p>Disorders of the male and female sexual maturation</p> <p>Clinical features and investigations of Turner syndrome, Klinefelter syndrome, and constitutional delay in growth and puberty</p>
Diabetes mellitus	<p>Clinical features, diagnosis and management of type 1 and type 2 diabetes</p> <p>Management of diabetic ketoacidosis</p>
Hypoglycaemia	<p>Acute management of hypoglycaemia in neonates and children</p> <p>The critical investigations at hypoglycaemia</p>
Disorders of fetal sex development	<p>Approach to a neonate with ambiguous genitalia</p>
Thyroid problems	<p>Clinical features and management of</p> <ul style="list-style-type: none"> <li>Congenital hypothyroidism</li> <li>Primary hypothyroidism</li> <li>Thyrotoxicosis</li> <li>Goitre and thyroiditis</li> </ul> <p>Approach to thyroid nodules</p>
Adrenal disorders	<p>Clinical features and management of congenital adrenal hyperplasia</p> <p>Management of adrenal crisis. Steroid coverage of children with adrenal insufficiency during acute illness or surgery.</p>
Disorders of calcium, phosphate and vitamin D metabolism and metabolic bone diseases	<p>Clinical feature and management of</p> <ul style="list-style-type: none"> <li>Hypocalcaemia</li> </ul>

	<p>Hypercalcaemia</p> <p>Hypophosphataemia</p> <p>Hyperphosphatemia</p> <p>Rickets and vitamin D deficiency</p>
Fluid and electrolytes disorders	<p>Clinical features and management of :</p> <p>Diabetes insipidus</p> <p>Syndrome of inappropriate antidiuretic hormone secretion (SIADH)</p>
Lipid disorders	<p>Clinical manifestation of dyslipidaemia</p> <p>Screening of high-risk children</p> <p>Cardiovascular risks</p>
<p>Desirable skills</p> <p>Interpretation of baseline hormonal tests and oral glucose tolerance test</p>	

### HIGHER TRAINING

TOPICS	SUBTOPICS
Common growth disorders	<p>Investigations and management of:</p> <p>Short stature/tall stature</p> <p>Failure to thrive</p> <p>Obesity</p> <p>Simple obesity and obesity due to other pathological causes</p> <p>Management strategies of obesity</p> <p>Screening for obesity related comorbidities</p> <p>Obesity prevention</p>
Common pubertal disorders	<p>Investigations and management of:</p> <p>Precocious/delayed puberty</p> <p>Thelarche/adrenarche</p> <p>Long term management of Turner syndrome, Klinefelter syndrome, constitutional delay in growth and puberty</p> <p>Clinical approach and management of primary amenorrhea, secondary amenorrhea, and oligomenorrhea</p>
Diabetes mellitus	<p>Long term management and complications of type 1 and type 2 diabetes</p> <p>Monogenic diabetes - neonatal diabetes mellitus, Maturity onset diabetes of the young</p>
Hypoglycaemia	Management of hyperinsulinaemic hypoglycaemia
Disorders of sex development (DSD)	Clinical feature and management of congenital adrenal hyperplasia and undervirilisation of male
Thyroid problems	<p>Long term management on common thyroid problems</p> <p>Congenital hypothyroidism</p> <p>Primary hypothyroidism</p> <p>Thyrotoxicosis</p> <p>Goitre/thyroiditis</p> <p>Thyroid storm</p>

Adrenal disorders	Clinical features and management of Adrenal hyperfunction and Cushing syndrome
Disorders of calcium, phosphate and vitamin D metabolism and metabolic bone disease	Clinical features and management of hyperparathyroidism, nutritional rickets and inherited hypophosphatemic rickets Approach to recurrent fractures and fragility fractures
Fluid and electrolytes disorders	Long-term management of: Diabetes insipidus Syndrome of inappropriate antidiuretic hormone secretion (SIADH)
Neuroendocrine system of hypothalamus and pituitary	Clinical features, investigations and long term management of panhypopituitarism Hormone -secreting pituitary adenoma
Endocrine manifestations and late effect of systemic disease	Risk factors and manifestations of the late effects of systemic diseases, including cancer survivors
Lipid disorders	Management of familial hypercholesterolaemia Lifestyle, dietary and pharmacological management
Desirable skills Interpretation of water deprivation test, growth hormone stimulation test, LHRH test and low dose short Synacthen stimulation tests	

## 8.9. Gastroenterology, Hepatology & Nutrition

### BASIC TRAINING

TOPICS	SUBTOPICS
Nutrition	Breast milk, infant formula, enteral and parenteral nutritional products Common causes of malabsorption and malnutrition and their consequences Nutritional requirements for healthy and sick children Principles and methods of dietary supplementation Enteral and parenteral nutrition – their indications and complications
Constipation	Simple constipation and the red flags
Gastro-oesophageal reflux	Early management of gastro-oesophageal reflux, reflux oesophagitis
Diarrhoea and vomiting	Management of acute and chronic diarrhea, vomiting and identifies red flags Management of dehydration
Gastrointestinal bleeding	Upper and lower gastrointestinal bleeding – common causes and early management
Liver disease	Neonatal and childhood jaundice, hepatitis and acute liver failure - different causes and complications Paracetamol poisoning
Abdominal pain	Acute abdominal pain Chronic abdominal pain Abdominal distention, Acute intestinal obstruction and the acute surgical abdomen

### HIGHER TRAINING

TOPICS	SUBTOPICS
Nutrition	Short bowel syndrome or gut failure – Multidisciplinary management
Constipation	Severe constipation – management Psychosocial aspect of chronic constipation
Gastro-oesophageal reflux	Investigations Surgical management – indication and referral
Inflammatory bowel disease	Ulcerative colitis Crohn’ s disease Other inflammatory bowel disease and acute colitis
Liver & pancreatic diseases	Fatty liver, particularly non-alcohol related fatty liver Coeliac disease Wilson’ s disease Chronic liver disease/chronic liver failure Chronic hepatitis B carriage and chronic hepatitis

Desirable Skill

Insertion of feeding tube

## 8.10. Genetics and Genomics

### BASIC TRAINING

TOPICS	SUBTOPICS
Trisomy, aneuploidy and chromosomal abnormalities	Genetic basis of Down syndrome, Turner syndrome, Klinefelter syndrome and other aneuploidy Different types of chromosomal abnormalities
Common genetic diseases	Epidemiology, clinical features and pathogenesis of common genetic diseases
Patterns of inheritance	Mendelian inheritance (single gene disorders) Common AD, AR and XR disorders Trinucleotide repeats Mitochondrial inheritance Sporadic conditions
Genetic variants	Different types of mutations: nonsense, missense, frameshift Loss-of-function and gain-of-function variants
Principle of population screening	The WHO principle of effective screening The present screening programmes in infants and children
Basic principles of antenatal diagnosis	Methods that can be used in antenatal diagnosis: Non-invasive prenatal diagnosis techniques Amniocentesis Chorionic villus sampling Preimplantation genetic diagnosis
Basic principles of genetic testing	Basic knowledge of genetic tests available for common genetic diseases
Desirable skills Obtaining buccal swab for genetic testing	

### HIGHER TRAINING

TOPICS	SUBTOPICS
Cytogenetics	The application of karyotyping, FISH and array comparative genomic hybridization, quantitative fluorescent polymerase chain reaction
Patterns of inheritance	Partial chromosomal deletions Mosaicism Imprinting disorders
Genetic counseling	The need of pre-test consent and counseling Understand the principle of disclosure
Next Generation Sequencing	Gene panel testing Whole exome sequencing Whole genome sequencing The implication of variants of unknown significance

Ethics	The ethics of genetic testing, screening and counselling
Desirable skills	
Basic Genetic Counselling skills	
Obtaining consent for genetic tests	

## 8.11. Haematology & Oncology

### BASIC TRAINING

TOPICS	SUBTOPICS
General Understanding of Paediatric Oncology	The characteristics, aetiology and epidemiology of common childhood tumours
Red Flags of the presentation of Common Oncological Conditions	Red flags of the presentation of common childhood oncological conditions including: <ul style="list-style-type: none"> <li>Acute leukaemias</li> <li>CNS tumours</li> <li>Lymphoma</li> <li>Neuroblastoma</li> <li>Osteosarcoma</li> <li>Hepatoblastoma</li> </ul>
Oncological Emergencies	Presentations and proper initial management of oncological emergencies including: <ul style="list-style-type: none"> <li>Leukocytosis</li> <li>Tumour lysis syndrome</li> <li>Superior vena cava obstruction</li> <li>Raised intra-cranial pressure</li> <li>Spinal cord compression</li> <li>Neutropenic fever</li> </ul>
Management approach of common oncological conditions	Treatment approach of common oncological conditions. The short and long term side effect of cancer treatment (chemotherapy and radiotherapy)
General Understanding of Common Haematological Conditions	The physiology and disorders of red blood cells, white blood cells, platelet and haemostasis
Anaemia	Iron deficiency anaemia Hereditary anaemia Haemolytic anaemia
Transfusion	Indications and precaution of blood and blood products transfusions
Thalassemia and other haemoglobinopathies	Presentation and management of transfusion - dependent thalassemia Complications of thalassemia Iron chelation and complication of iron overload
Haemophilia and other clotting disorders	Presentation and overview of management of haemophilia and clotting disorders; Complications of haemophilia; Concept of factor replacement
Common platelet disorders	Presentation and management of acute ITP; Treatment options for persistent and chronic ITP
Multi-disciplinary care	Roles of health professionals including oncologists, nurses, child life specialists, palliative care team, clinical psychologists

	and social workers
<p>Desirable skills</p> <ul style="list-style-type: none"> <li>Bone marrow aspiration and trephine biopsy</li> <li>Safe administration of chemotherapy by various route: Intrathecal, intravenous and intramuscular chemotherapy</li> <li>Appropriate handling of central venous catheter.</li> </ul>	

### HIGHER TRAINING

TOPICS	SUBTOPICS
Acute Leukaemia / Lymphoma	Different types of acute leukaemias and lymphomas: <ul style="list-style-type: none"> <li>Acute lymphoblastic leukaemia</li> <li>Acute myeloid leukaemia</li> <li>Non-Hodgkin lymphoma</li> <li>Hodgkin lymphoma</li> </ul>
Complex haematological conditions	Bone marrow failure syndrome Haemophagocytic lymphohistiocytosis Histiocytic conditions
CNS Tumours and Solid Tumours	Treatment modalities of CNS tumours and solid tumours Concept of radiotherapy in children Complications of radiotherapy
Haematopoietic Stem Cell Transplantation (HSCT) and Cellular Therapy	Concept of HSCT and cellular therapy Indications of HSCT and cellular therapy; Understanding of the principle of apheresis Common complications of HSCT and cellular therapy
Cancer Survivorship	The long term problems encountered by cancer survivors - growth, organ involvement, developmental and educational, psychological General understanding of the long-term follow-up approach
<p>Desirable skills</p> <p>Handling of central venous catheter blockage or dislodgement</p>	

## 8.12. Immunology, Allergy & Infectious Diseases

### BASIC TRAINING & HIGHER TRAINING

TOPICS	SUBTOPICS
Congenital infection & neonatal infection	Presentation of congenital & neonatal infection The common pathogens and initial management
Common or serious infections conditions in children	Infections of different organ systems (respiratory, gastrointestinal, urinary tract, skin and soft tissue, central nervous system) Common viral infections Basic infection control measures Lymphadenopathy Fever in return travellers Antimicrobial use – rationale of selection, side effects
Notifiable infectious disease and emerging/re-emerging infections in Hong Kong	The local policy on the handling of notifiable disease Current emerging/ re-emerging infections
Tuberculosis	Clinical features and initial management of pulmonary and extra-pulmonary tuberculosis
Pyrexia of unknown origin (PUO)	Possible and common causes Rationale of investigation and management
Primary and secondary Immunodeficiency	Conditions and medical treatments that may predispose to an immunocompromised state Clinical features of inborn error of immunity Common opportunistic infection in immunocompromised persons and precautionary measures
Food and drug allergy	Common presentations and acute management of IgE and Non-IgE mediated allergy Severe cutaneous adverse reactions to drugs
Anaphylaxis	Identification and acute management of anaphylaxis
Atopic dermatitis, urticaria, angioedema and anaphylaxis	Diagnosis and management of common allergic disorders
Childhood immunization	Indications, contraindications and complication of routine childhood immunization

Desirable skills

Performing and interpreting Mantoux test

Taking swab as diagnostic test for vesicle or bulla lesions

Use of adrenaline auto-injector

## 8.13. Intensive Care

### BASIC TRAINING

TOPICS	SUBTOPICS
Resuscitation	Basic concepts in paediatric cardiopulmonary resuscitation.
Basic principle of mechanical ventilation	Respiratory physiology under assisted ventilation (invasive and non-invasive) Short and long term complications of ventilation Appropriate use of oxygen Interpretation of blood gas
Basic pharmacology and drug interaction	Use of inotropes, analgesic, sedatives, neuromuscular blocking agents, anti-seizure medications Toxicology & poisoning - Paracetamol poisoning
Shock	Different types of shock and their basic management
Acute management of congestive heart failure and common arrhythmia	Common causes and manifestations of heart failure Pharmacology of common cardiac drugs - diuretics, digoxin, anti-arrhythmic drugs, beta-blockers
Respiratory Intensive care	Recognition of respiratory failure Status asthmaticus Pleural effusion and pneumothorax Upper airway obstruction: croup, epiglottitis, foreign body, anaphylaxis
Neurological intensive care	Severe meningitis and other CNS infection Brain tumours and intracranial bleeding Raised intracranial pressure Status epilepticus Comatose patients Acute paralytic diseases: Guillain- Barre syndrome, Transverse myelitis
Endocrine intensive care	Diabetic ketoacidosis Hypoglycemia Adrenal crisis and congenital adrenal hyperplasia Thyroid storm Central diabetes insipidus Emergency in inborn errors of metabolism
Renal intensive care and electrolytes abnormality	Acute renal failure Electrolyte and acid-base disturbances
Haematology and oncology intensive care	Severe anaemia and bleeding tendency Emergency associated with childhood malignancy - Tumour lysis syndrome, neutropenic fever Use of blood products
Infection in intensive care	Rational use of antibiotics Prevention of hospital acquired infection Infection control measures

Gastrointestinal intensive care	Severe GI bleeding Pancreatitis Liver failure
Nutrition support	Enteral and parenteral nutrition in critically ill patients
Trauma	Multiple injuries Head injury
Post-operative care	General surgery Neurosurgery Cardiac surgery
Psychological support and Bereavement	Psychological response of patients and their relatives towards PICU admission, morbidity and mortality
Desirable skills Basic Ventilator Setting	

### HIGHER TRAINING

TOPICS	SUBTOPICS
Cardiology intensive care	Cardiogenic shock Malignant hypertension Arrhythmia
Respiratory intensive care	Adult respiratory distress syndrome
Renal intensive care	Continuous Renal Replacement Therapy
Transport of PICU patients	Stabilization of sick children during interhospital transport
Palliative care in PICU	Ethical and legal issues related to withdrawal of support Organ donation The principle of diagnosing brain death
Medical audit	Use of standards and protocols in PICU Quality assurance programmes
Desirable skills Vascular access for central venous pressure Basic echocardiography Basic bronchoscopy Advanced modes of assisted ventilation Prescription of continuous renal replacement therapy and plasma exchange	

## 8.14. Mental Health

### BASIC TRAINING

TOPICS	SUBTOPICS
Basic Principles of Emotional and Behavioural Development	Basic theories of childhood cognitive and social development, and attachment theory. Genetic, psychological, familial (parental mental health problems), neurological and socio-economic factors in the mental well-being of CYP.
Physical illness and mental health	The impact of physical illness on mental health
Determinants of mental well-being	Understand and being able to explain the determinants of mental well-being
Common Childhood behavioural problems:	Feeding problems, infantile colic Failure to thrive Temper tantrums School refusal
Drug and alcohol problems	The effects, common presentations and potential for harm of alcohol and other abusive drugs on CYP The impact of alcohol and drug abuse on child ' s mental health
Common mental health conditions	The diagnostic criteria of common mental health conditions:  Attention-deficit / Hyperactivity disorder Autism spectrum disorder Anxiety Depression Conduct disorder Oppositional Defiant disorder Eating disorder Deliberate self-harm
Psychosis and Schizophrenia	Early recognition and referral
Desirable skills Basic counselling skills	

### HIGHER TRAINING

TOPICS	SUBTOPICS
Dysfunctional parent-child attachment	The impact of violence and abuse on the development and mental health of a CYP
Organic Psychiatric Disorders	Workup for organic disorders with psychiatric presentations
Functional physical disorders	Approach to helping CYP who present with physical symptoms that have a predominantly psychological substrate
Physical illness and mental health	Assessment, counselling and referral when necessary for CYP whose mental health was adversely affected by their physical illness.

Impact of parents and family on mental health	The impact of parental substance abuse and parental mental illness on mental health of CYP The Comprehensive Childhood Developmental Service
Common mental health conditions	Assess and manage common mental health conditions of CYP.  Attention-deficit / Hyperactivity disorder Autistic spectrum disorder Depression Conduct disorder Oppositional – defiant disorder Eating disorder Deliberate self-harm Suicidal Ideation  Recognise psychiatric disorders that need referral to child psychiatrists for management
Psychosis and Schizophrenia	Assessment of possible organic causes
Desirable skills Motivational Interviewing	

## 8.15. Metabolic Medicine

### BASIC TRAINING

TOPICS	SUBTOPICS
Pathophysiology of inherited metabolic diseases	Cellular intoxication Transporter defect Energy Defect Disorder of intracellular trafficking Defect of synthesis or degradation of complex molecules
Emergency related to inherited metabolic diseases	Initial approach to investigation and acute management of Hypoglycaemia Hyperammonaemia Metabolic acidosis
Symptomatology of inherited metabolic diseases	Clinical presentations of inherited metabolic disorders Metabolic emergency Neurological involvement such as intellectual disability Cardiomyopathy Liver disease Kidney disease Sudden death
Basic and special metabolic investigations	Indications of metabolic tests including basic: ammonia, lactate, ketones, glucose, gas and a range of special investigations Role of genetic testing in diagnosis of inherited metabolic diseases Approach to abnormalities in basic metabolic investigations
Newborn screening for inherited metabolic disorders	The current Hong Kong Newborn Screening Program for Inborn Errors of Metabolism (NBSIEM) - scope of service and potential limitations

### HIGHER TRAINING

TOPICS	SUBTOPICS
Metabolic emergency	Advanced management of metabolic emergency - vitamin responsive conditions, plasma exchange, substrate replacement, metabolic bypass
Special metabolic investigations	Indications and approach to abnormalities of specific metabolic investigations including biochemical and molecular analyses
Long term management of inherited metabolic disorders	Principles of management of IMD including dietary therapy, transplantation, substrate or enzyme replacement, chelation therapy

## 8.16. Neonatology

### BASIC TRAINING

TOPICS	SUBTOPICS
Antenatal factors related to neonatology	Fetal growth, development and physiology Maternal conditions and treatment affecting the newborn Peri-partum factors affecting the newborn
Prematurity	Complications of Prematurity Apnoea of prematurity Bronchopulmonary dysplasia Intraventricular haemorrhage Patent ductus arteriosus Periventricular leucomalacia Respiratory distress syndrome Retinopathy of prematurity
Pulmonary physiology and pathophysiology	Basic pulmonary physiology as related to neonatal ventilation Common neonatal respiratory conditions: Transient tachypnoea of the newborn Neonatal pneumonia Meconium aspiration syndrome Pneumothorax Pleural effusions Apnoea/hypopnoea in a term infant Congenital pulmonary malformations Congenital malformations causing airway obstruction Congenital anomalies causing respiratory disorders
Non-invasive and invasive ventilatory support	Operations of invasive and non-invasive ventilation, Ventilation/oxygenation strategies Pressure regulation/targeting Volume regulation/targeting Triggering (pressure/flow/Edi) High frequency oscillatory ventilation (interpretation of frequency, tidal volume and DCO <sub>2</sub> ) Use of inhaled nitric oxide Importance of PEEP and its relation with functional residual capacity and compliance Interpretation of trends of ventilator parameters Indications for surfactant therapy
Cardiovascular physiology and pathophysiology	Transition from fetal to neonatal physiology Congenital cyanotic heart disease Congenital heart disease and heart failure Persistent pulmonary hypertension of the newborn Principles of management of hypotension in newborn infants
Neonatal neurology	Neonatal encephalopathy

	<p>Hypoxic-ischaemic encephalopathy and hypothermic therapy</p> <p>Neonatal seizure and seizure management</p> <p>Long-term neurodevelopmental outcomes of newborns with prematurity and/or brain injury</p>
Neonatal nutrition	<p>Importance of breastfeeding to normal infants and infants with medical problems</p> <p>Enteral nutrition and parenteral nutrition</p>
Neonatal sepsis	<p>Early onset sepsis and late onset sepsis</p> <p>Risk factors</p> <p>Monitoring and screening of high-risk infants</p> <p>Sepsis evaluation</p> <p>Early recognition of sepsis and/or septic shock</p> <p>Treatment of the septic infant</p> <p>Appropriate use of antibiotics</p>
Neonatal abnormalities	<p>Recognition and initial management of infants with antenatal diagnoses, dysmorphic features, suspected syndromal diagnoses and congenital abnormalities</p>
Common neonatal problems	<p>Neonatal jaundice</p> <p>Neonatal hypoglycaemia</p> <p>Infants with common congenital abnormalities, e.g., urinary tract dilatation</p> <p>Neonatal polycythaemia</p> <p>Electrolyte disturbances in the newborn</p> <p>Haemolytic diseases of the newborn</p> <p>Birth injuries</p> <p>Neonatal abstinence syndrome</p>
Common surgical emergencies	<p>Recognition and initial stabilisation of neonates with surgical emergencies</p> <p>Medical management of newborn infants with intestinal obstruction, e.g., volvulus</p> <p>Congenital gastrointestinal abnormalities, e.g., omphalocele, congenital diaphragmatic hernia</p> <p>Necrotising enterocolitis</p>
Ethical issues in neonatology	<p>Ethical issues related to borderline viability</p> <p>Ethical issues related to redirection of care in a neonate</p>
Examination of the well-appearing newborn	<p>Assessment of newborn maturity</p> <p>Newborn screening assessment</p>
Desirable skills	<p>Interpretation of neonatal arterial and capillary blood gas results</p> <p>Interpretation of trends of ventilator parameters</p> <p>Basic skills of surfactant delivery</p> <p>Head ultrasound examination</p> <p>Injection of hyaluronidase for extravasations</p> <p>Neonatal transport - intra-hospital transportation</p>

## HIGHER TRAINING

TOPICS	SUBTOPICS
Non-invasive and invasive ventilatory support	Advanced modes of ventilatory support
Cardiovascular physiology and pathophysiology	Haemodynamic assessments and management of the sick neonate Indication for advanced cardiopulmonary management at tertiary centre Initial management of newborn with critical cardiac conditions
Common surgical emergencies	Perioperative management of neonates with surgical emergencies
Neonatal neurology	The use of second line anti-seizure medications (e.g., levetiracetam, topiramate) Use of anaesthetic agents for seizure control Interpretation of aEEG
Genetic disorders	Genetic evaluation of newborns
Haematological disorders	Neonatal thrombocytopenia Neonatal coagulation disorders
Renal disorders	Neonatal acute kidney injury Indications of advanced renal management at tertiary centre
Desirable skills Intubation by video laryngoscopy Thin catheter techniques in surfactant delivery Neonatal transport - inter-hospital transportation Chest physiotherapy for collapsed lungs Ascitic tap Haemodynamic monitoring devices Multidisciplinary discharge planning for NICU graduates with chronic medical conditions Quality improvement in neonatology	

Remark – Neonatology is not a mandatory part of Higher Training. The topics listed in the Higher Training section are intended as a guide to Higher Trainees rotating through neonatology during their Higher Training.

## 8.17. Nephrology

### BASIC TRAINING

TOPICS	SUBTOPICS
Embryology and anatomy of genito-urinary tract development	Development and anatomy of the urinary tract.
Fluid, electrolyte and acid-base balance	Physiology of fluid, electrolyte, and acid-base control by kidney Presentations, investigation and management
Urinary Tract Infection	Presentations of UTI in different age groups Differentiation between upper and lower urinary tract infection Pros and cons of different urine collection methods Definition and treatment of UTI Follow up investigations Vesico-ureteric reflux grading and indications for antibiotic prophylaxis and surgical intervention
Proteinuria & Nephrotic syndrome	Definition of proteinuria and different steroid responsiveness Presentation & aetiologies of nephrotic syndrome Investigations and acute management of nephrotic syndrome Complications of nephrotic syndrome and treatment side effects
Haematuria & Nephritic syndrome	Pathophysiology and causes of microscopic and macroscopic haematuria Definition of nephritic syndrome, its presentation and causes Investigations of haematuria Treatment of nephritic syndrome and recognition of its complications
Congenital Anomalies of Kidney and Urinary Tract	Hydronephrosis Definition Aetiologies (congenital/ acquired) Investigations and management of different severity and causes of hydronephrosis, including posterior urethral valve, PUJO Cystic kidney disease The clinical course and outcome of Solitary renal cyst Multi-cystic dysplastic kidney disease
Hypertension	Technique in measuring BP in different age groups Definition of hypertension; recognition of white coat hypertension Aetiologies of primary and secondary hypertension and investigations Principles of hypertension management

	Management of hypertensive emergency
Acute Kidney Injury	<p>Definition and cause of acute kidney injury</p> <p>Investigations, including indications of renal biopsy</p> <p>Assessment and management of fluid status, hypertension, electrolyte and acid-base disturbance in AKI.</p> <p>Presentation and causes of haemolytic-uraemic syndrome (HUS)</p>
Chronic Kidney Disease	<p>Definition and causes of chronic kidney disease</p> <p>The basis and use of estimated glomerular filtration rate (eGFR) in CKD.</p> <p>Staging CKD with eGFR,</p> <p>Understand complications of CKD (anemia, metabolic bone disease, acid-base &amp; electrolyte disturbance, growth failure)</p>
Renal Calculi	<p>Presentation</p> <p>Causes and investigations</p> <p>Management principles</p>
Voiding problem	Pathophysiology, presentation, investigation and management of primary nocturnal enuresis (and other voiding dysfunctions)
Renal tubular disorders	<p>Presentation of tubular disorders, including different types of renal tubular acidosis</p> <p>Presentation and causes of nephrogenic diabetes insipidus; diagnosis and treatment</p>
<p>Desirable skills</p> <p>Use of frequency-volume chart</p> <p>Calculation of eGFR with different formulas</p>	

### HIGHER TRAINING

TOPICS	SUBTOPICS
Proteinuria & Nephrotic syndrome	<p>Workup for steroid resistant/ frequent-relapsing NS (include renal biopsy, genetics study)</p> <p>Treatment modalities of steroid resistant NS/ frequent-relapsing NS</p> <p>Indication, procedure and associated risk of kidney biopsy</p>
Haematuria & Nephritic syndrome	<p>Management of</p> <ul style="list-style-type: none"> <li>Post-streptococcal glomerulonephritis</li> <li>Autoimmune GN (lupus, vasculitis, anti-Glomerular basaeament membrane)</li> <li>Alport's syndrome</li> <li>IgA nephropathy</li> <li>IgAVN</li> </ul> <p>Treatment modalities of different glomerulonephritis</p>
UTI with VUR, reflux nephropathy	Management and monitoring complications of reflux nephropathy, including the use of radio-isotope imaging
Hypertension	<p>Application of Ambulatory Blood Pressure Monitoring</p> <p>Definition of white coat hypertension, masked hypertension,</p>

	<p>ambulatory hypertension</p> <p>Management of hypertension including hypertensive emergency</p> <p>Evaluation of complications and end-organ damage with hypertension</p>
Voiding problem	<p>Presentation, investigation and management of neurogenic bladder</p> <p>Multidisciplinary care of spina bifida</p> <p>The use of urodynamic study</p>
Congenital Anomalies of Kidney and Urinary Tract	<p>Joint care in the formulation of management plan in complex urological conditions</p> <p>Role of genetic workup in cystic kidney disease and hereditary nephropathy</p>
Acute kidney injury	<p>Principles &amp; indication of kidney replacement therapy</p> <p>Choice of appropriate KRT in different clinical conditions</p>
Chronic kidney disease	<p>Management of complications of CKD</p> <p>Growth failure</p> <p>Anaemia</p> <p>Metabolic bone disease</p> <p>Acid-base &amp; electrolyte disturbance</p> <p>Principles of peritoneal dialysis and haemodialysis</p> <p>Role of renal transplantation</p>

## 8.18. Neurology

### BASIC TRAINING

TOPICS	SUBTOPICS
Febrile convulsions	Definition of febrile convulsions Differentiation of typical and atypical febrile convulsions Acute management of seizures Parental Counselling Prognosis
Epilepsy	Definition of epilepsy Common manifestation of epilepsy Causes of epilepsy Performing basic investigations for seizures Use of common anti-seizure medications
Status epilepticus (SE)	Diagnosis Life support during seizures Protocol of SE management
Cerebral palsy (CP)	Common causes Common manifestations Classification of CP Common co-morbidities
Abnormal anatomy of head and brain	Presentation and management of neural tube defects Normal and abnormal variation in head shape and sizes
CNS infections – Meningitis and encephalitis	Common presentations and signs Acute management
Headache	Common causes Migraine and tension type headache – presentation and management Features of raised Intracranial pressure and red flags for underlying causes of headache
CNS tumours	Common presentation of posterior fossa tumours Differentiation from other causes of acute ataxia
Acute encephalopathy	Features of acute encephalopathy Common causes of altered consciousness Acute management of acute encephalopathy
Neuromuscular diseases	Common differential diagnosis of hypotonia and weakness Common features, early recognition and diagnostic approach of Duchenne muscular dystrophy Spinal muscular atrophy Myasthenia gravis Guillain-Barre syndrome
Head injury	Initial and urgent management of head injury
Developmental delay	Assess different development domains and recognize delayed development

	Investigation of underlying causes Initial management Diagnostic criteria for autistic spectrum disorder and attention deficit-hyperactivity disorder
Common Movement disorders	Ataxia, choreoathetosis, tremor, jitteriness, stereotypic movements, tics and dystonia

## HIGHER TRAINING

TOPICS	SUBTOPICS
Epilepsy	Common epileptic syndromes The possible drug interactions of anti-seizure medicines The common mimickers of epilepsy
Cerebral palsy (CP)	Gross Motor Function Classification System Management of spasticity and the comorbidities of cerebral palsy Multidisciplinary management of cerebral palsy The role of Special education
Abnormal anatomy of the nervous system	Presentation and management of Lissencephaly Schizencephaly Arnold-Chiari malformations
Immune-mediated conditions affecting the nervous system	Common presentations, signs and acute management of Transverse myelitis Acute disseminated encephalomyelitis Acute necrotizing encephalitis Autoimmune encephalitis
Acute flaccid paralysis	Common causes and their management Surveillance programme for the eradication of wild-type poliomyelitis
Neuromuscular diseases	Rational approach to investigation of hypotonia and paralysis Variants of SMA and dystrophinopathies Multidisciplinary management Disease modifying treatment of SMA and DMD
Functional neurological disorders	Understand the features of functional neurological disorders, pseudoseizures, unexplained weakness and other neurological conditions that do not have an explanation
Metabolic conditions affecting the nervous system	Common neurological manifestation of electrolyte and glucose disturbances Common inheritable metabolic conditions with neurological signs or symptoms
Altered consciousness	The rational approach to formulate differential diagnosis of altered consciousness.
Brain death	The principle of diagnosing brain death and the process of brain death certification
Developmental delay	Know the support and services a child can receive from the local community, including government and non-government

	resources
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## 8.19. Ophthalmology

### BASIC TRAINING

TOPICS	SUBTOPICS
Common eye problems	Nasolacrimal duct obstruction Chalazia Hordeolum Epiblepharon Approach to epiphora and allergic conjunctivitis
Cataract	Detection of cataract Common causes of cataract
Childhood glaucoma	Detection of glaucoma
Intraocular mass and tumour	Detection of intraocular mass Differential diagnosis of intraocular mass, particularly retinoblastoma
Optic neuritis	Detection of relative afferent pupillary defect
Paediatric retinal conditions	Recognise the staging, screening methods and management of retinopathy of prematurity Retinal detachment
Eye infection	Common causes and management of conjunctivitis, blepharitis, peri-orbital and orbital cellulitis
Strabismus and diplopia	Common causes of strabismus and diplopia Evaluation of strabismus
Ptosis	Common causes of ptosis Evaluation of ptosis
Delayed visual behaviour and visual impairment	Approach to children with delayed visual behaviour and visual impairment Understand different types of common refractive errors and amblyopia Common causes of visual impairment and cortical visual impairment
Desirable skills Direct ophthalmoscopy Snellen Chart Ishihara Chart	

### HIGHER TRAINING

TOPICS	SUBTOPICS
Nystagmus	Common causes of nystagmus and its associated features. The need to investigate for visual acuity and ocular abnormality
Strabismus	Neurological causes of incomitant squints
Ocular manifestations of systemic diseases	Genetic and chromosomal abnormalities Metabolic disorders such as IEM, hyperthyroidism

	<p>Craniofacial anomalies</p> <p>Rheumatological and inflammatory disorders</p> <p>Phakomatoses</p> <p>Neuroblastoma</p> <p>Retinal and ocular findings in shaken baby syndrome/abusive head trauma</p>
Visual impairment and blindness	Genetic of hereditary and non-hereditary conditions that causes visual impairment, particularly Usher syndrome and retinitis pigmentosa
<p>Desirable skills</p> <p>Prescribing mydriatics for eye examination</p>	

## 8.20. Palliative Care

### Basic Training

Topics	Subtopics
Philosophy of Paediatric Palliative Care	<p>Definition of ‘holistic care’ and how it applies to medical care of children</p> <p>Physical, spiritual, social, psychological and emotional aspects in children needing palliative care</p> <p>Types of common malignant and non-malignant conditions requiring PPC</p> <p>The principles of balancing burden and benefit in considering intervention</p>
Ethics and Law	<p>The four main principles of: autonomy, non- maleficence, beneficence and justice</p> <p>Local and international guidelines for withholding and withdrawing life-sustaining treatment</p>
Pain	<p>Know that pain is poorly recognised, under- estimated and under-managed in children and infants</p> <p>Be aware that development alters the interpretation of pain scales (see desirable skills)</p> <p>WHO Pain Guidelines for children</p>
Respiratory symptoms	<p>The definition and subjective nature of dyspnoea</p> <p>Diagnosis and treatment of major reversible causes of dyspnoea in children on palliative care</p>
Desirable skills	Using simple pain scales such as face scales and visual analogue scale

### Higher Training

Philosophy of Paediatric Palliative Care	<p>Features of non-pathological behaviours and psychological responses associated with life-limiting conditions (e.g. anger and adjustment reactions).</p> <p>Local agencies are available to support children and families for problems in each dimension (physical, psychological, social and spiritual)</p> <p>Integrative medicine strategies and the roles of other professionals in providing holistic care, especially nurses, social workers, play specialists, psychologists and chaplains, complementary and alternative therapist and initiate appropriate referrals</p>
Pain	<p>Pain scales - more advanced pain scales, and their limitation in children with developmental or neurological disability.</p> <p>The use of opioid as an effective pain control.</p>

	The need to address emotional, psychological, social and spiritual needs as well as physical ones in managing pain
Respiratory Symptoms	<p>Pathophysiology of dyspnoea in children with malignant and non-malignant conditions e.g. Cerebral palsy, Duchenne muscular dystrophy, lung metastases</p> <p>The principles of pharmacological and non-pharmacological management of dyspnoea, including the place of oxygen therapy</p> <p>Multidisciplinary team approach to management. e.g. psychologist, play specialist, physiotherapy</p>
GI Symptoms:	Pathophysiology and management of hiccough, nausea, vomiting, constipation and diarrhoea in palliative care.
End of Life Care	<p>Clinical features and management of imminent death</p> <p>Different routes of administering medications and fluids (subcutaneous, buccal, intranasal)</p> <p>Recognize the psychological stress of the parent/family members facing the dying child. Respect the wish of the dying child and family, and willing to work with the MDT to meet their needs</p>
Ethics and Law	<p>Management strategies when families/patients do not agree with treatment options proposed by healthcare team.</p> <p>Ethical principles of diagnosis of brain death</p>
Model of Death of Children	The developmental models of children' s view of death
Bereavement	<p>The general concepts of loss, grief and mourning.</p> <p>Basic theories about bereavement: process of grieving, adjustment to loss</p>
<p>Desirable Skills</p> <p>Use of more advanced pain scales appropriate to the development of a child.</p> <p>SPIKES model in breaking bad news</p> <p>Conduct a DNACPR and Advance Care Plan interview</p>	

## 8.21. Respiratory Medicine

### BASIC TRAINING

TOPICS	SUBTOPICS
Pulmonary physiology and anatomy	<p>Pulmonary embryology and its clinical relevance</p> <p>Normal and abnormal anatomy of paediatric upper airway and lower airway</p> <p>Pulmonary physiology and variations according to age group and disease status</p> <p>Respiratory failure: clinical features and management strategies</p> <p>Normal sleep physiology</p>
Pulmonary diagnostic tests	<p>Indications for pulmonary function tests, sleep assessment, lung imaging and endoscopy</p> <p>Modality of pulmonary function and sleep assessment</p> <p>Interpretation of simple spirometry results</p> <p>Interpretation of arterial and capillary blood gas results</p> <p>Interpretation of chest radiographs</p>
Common respiratory presentations	<p>Approach to common respiratory presentations:</p> <ul style="list-style-type: none"> <li>Chronic cough</li> <li>Stridor</li> <li>Hoarseness</li> <li>Choking</li> <li>Snoring</li> <li>Wheezing</li> </ul>
Acute infective respiratory diseases	<p>Respiratory infections and their complications</p> <p>Acute bronchiolitis</p> <p>Community acquired pneumonia</p> <p>Acute epiglottitis, severe croup, tracheitis</p> <p>Tuberculous and non-tuberculous mycobacterial infections with focus on pulmonary tuberculosis, TB pleural effusion, TB lymph node and latent TB infection</p>
Chronic suppurative lung disease	<p>Bronchiectasis</p> <p>Lung abscess</p> <p>Pleural empyema</p>
Allergic respiratory conditions	<p>Asthma</p> <p>Wheeze in pre-school children</p> <p>Allergic rhinitis</p>
Common/important respiratory conditions in newborn term and/or preterm infants	<p>Refer to neonatology syllabus for details</p> <p>Chronic lung disease</p>
Pulmonary complications on the intensive care unit	<p>Refer to the PICU syllabus</p>
Pleural diseases, pneumothorax and pleural effusion	<p>Pneumothorax</p> <p>Pleural effusion</p> <p>Chylothorax</p>

	Haemothorax
Respiratory manifestations of diseases of non-respiratory systems	Connective tissue diseases Cor pulmonale Sudden infant death syndrome and apparent life-threatening events Foreign body aspiration and chronic aspiration syndrome Gastro-oesophageal reflux related lung disease
Sleep medicine	Sleep disordered breathing including obstructive sleep apnoea syndrome Importance of sleep routine and sleep hygiene
Desirable skills Use of common modes of invasive mechanical ventilation Use of non-invasive ventilatory support Use of metered dose inhaler and other inhaling medication devices	

### HIGHER TRAINING

TOPICS	SUBTOPICS
Pulmonary diagnostic tests	Basic interpretation of polysomnography Interpretation of CT scans
Behavioural aspects of respiratory lung disease	Functional cough Hyperventilation syndrome
Environmental lung disease	Hypersensitivity pneumonitis The effects of active and passive smoking Effects of toxin inhalation Common indoor/outdoor pollutants
Rare respiratory conditions	Cystic fibrosis Obliterative bronchiolitis Interstitial lung disease Primary ciliary dyskinesia Bronchiolitis obliterans Bronchiolitis obliterans organizing pneumonia Pulmonary haemorrhage syndrome Respiratory malignancy Congenital central hypoventilation syndrome Narcolepsy Pulmonary vascular disease
Pulmonary complications of children with complex medical conditions	Complex neurological disabilities Neuromuscular disorders Musculoskeletal disorders Haematological or oncological conditions
Respiratory and ventilatory care of children with complex medical conditions/needs	Peri-operative respiratory care Long-term respiratory management Long-term mechanical ventilation
Discharge planning for chronic disease management	Assessment for need of maintenance/prophylactic therapy Home oxygen therapy and/or respiratory support Follow-up planning

Sleep medicine	Behavioural sleep problems Parasomnias
Desirable skills Chest physiotherapy for collapsed lung	

## 8.22. Rheumatology

### BASIC TRAINING

TOPICS	SUBTOPICS
Basic clinical skills in rheumatology	<p>Examination of individual joints and assess physical function of CYP</p> <p>Commonly used laboratory investigations in the diagnosis and evaluation of rheumatological diseases, including autoimmune markers, autoantibodies, acute phase reactants, and complements</p> <p>Radiological investigations in assessment and diagnosis</p> <p>Workup before starting Disease modifying anti-rheumatic drugs (DMARDs) or immunosuppressants</p>
Juvenile idiopathic arthritis (JIA)	<p>Diagnosis and Classification of JIA</p> <p>Clinical presentations (articular &amp; extra-articular), and assessment of disease activity</p> <p>Relevant Investigations</p> <p>The principle in management of JIA (pharmacological and non-pharmacological aspect)</p> <p>Eye assessment especially young onset ANA positive JIA, and initiate appropriate treatment</p>
Childhood onset Systemic lupus erythematosus (cSLE)	<p>Diagnostic criteria of cSLE</p> <p>Laboratory investigations and their role in management (diagnosis and disease monitoring)</p> <p>Principles of management, including use of different medications, sun protection, vaccination</p> <p>Differential diagnosis for cSLE</p>
Infection related arthritis and reactive arthritis	<p>Clinical presentation, diagnosis, investigation and management of</p> <p>Acute septic arthritis</p> <p>Osteomyelitis</p> <p>Reactive arthritis</p> <p>Rheumatic fever</p> <p>Post-streptococcal reactive arthritis</p>
Vasculitis	<p>Classification of systemic vasculitis</p> <p>Clinical presentation, diagnosis and management of Henoch-Schonlein Purpura, Ig A vasculitis, Kawasaki disease</p>
Paediatric rheumatological emergencies	<p>Clinical features of infection in a patient who is immunocompromised</p> <p>Management of infection in immunocompromised patient</p>
Non-inflammatory musculoskeletal conditions	<p>Approach to differential diagnosis of non-inflammatory musculoskeletal pain</p> <p>Clinical presentation, and management of growing pain and hypermobility</p>

Other rheumatological diseases	Clinical presentation of juvenile dermatomyositis, Bechet ' s disease
Desirable skills Use of Paediatric Gait, Arms, Legs and Spine (pGALS) as screening musculoskeletal assessment	

## HIGHER TRAINING

TOPICS	SUBTOPICS
Clinical skills in Rheumatology	Use of histological examination (muscle biopsy, skin biopsy, kidney biopsy), capillaroscopy, pulmonary function test, and joint aspiration Expanded spectrum of therapeutic agents including biological and target synthetic DMARDs Assessment tools in different rheumatological diseases Work up on opportunistic infection and use of prophylaxis
Juvenile idiopathic arthritis	Multidisciplinary collaborative management planning Biomarkers in Juvenile idiopathic arthritis
Childhood-onset systemic lupus erythematosus & other systemic connective tissue disease	Assessment of disease activity, severity, and organ damages in cSLE Clinical presentation and diagnosis of less common systemic connective tissue disease
Vasculitis	Clinical presentation, evaluation and mimics of polyarteritis nodosa, Takayasu arteritis Organ-threatening conditions in systemic vasculitis
Paediatric rheumatological emergency	Clinical features and management of rheumatological emergencies Macrophage activation syndrome Catastrophic antiphospholipid syndrome Severe Raynaud's phenomenon Overwhelming sepsis
Desirable skills Intra-articular corticosteroid injection Skin biopsy	



## 9. Formative Assessment Tools

At the first stage of implementation, the Working Group proposes four formative tools, namely:

1. Directly observed procedural skills (DOPS)
2. Mini clinical evaluation exercise (MiniCex)
3. Case based discussion (CbD) - General Paediatrics and Safeguarding
4. Paediatric Multi-source feedback (PaedMSF)

### **FIRST HAND OBSERVATION**

These assessments are based at workplace. Trainers should give the assessment based on **FIRST HAND** observation of the trainee.

### **ASSESSMENT BY DOMAIN**

Each assessment tool is linked to a number of domains in the curriculum. The domains under assessment are listed clearly in the assessment form.

### **ASSESSMENT GRID**

The assessment grid maps out the domains assessment by each summative and formative assessment tool.

## **9.1. Directly Observed Procedural Skills (DOPS)**

### **What is DOPS?**

DOPS is a workplace based assessment when a trainee's performance of certain procedure on a real patient or in simulation is directly observed and adjudicated. Feedback is given on the various aspects of the procedure. A trainee would be credentialed to be an independent operator of the procedure if the assessor is satisfied of the skill.

### **How long does an assessment take?**

It depends on the procedure. Generally, feedback will take an additional third of the procedure observation time. (Wilkinson et al 1998 Medical Education 42(4):364-373). Usually it can be done in 20 minutes or so.

### **How many times need it be done?**

DOPS of a certain procedure need not be repeated once the trainee has been credentialed as an independent operator.

### **How is DOPS documented?**

DOPS will be recorded in the form in Appendix 1.

## 9.2. Mini Clinical Evaluation Exercise (MiniCex)

### What is MiniCEX?

Developed by the American Board of Internal Medicine, MiniCEX is an exercise where a trainer directly observes a clinical encounter of a trainee in the workplace. A short discussion on the encounter is made, and then a feedback is provided by the assessor. It is an exercise that encourages **self-reflection**.

### What is being evaluated?

The commonest would be history taking, physical examination, management planning and clinical reasoning. Other areas can be assessed too, like communication skills, patient education, safeguarding process, etc.

### How much time does a MiniCEX take?

A typical session takes about 20 minutes, but it may vary according to real life situation. It can be initiated by the trainee or the trainer

### How many times need it be done? And who are the assessors?

MiniCEX should be done repeatedly to give a full coverage of all domains. We suggest at least 10 to 15 in three years should be done, according to a consensus statement (Buriscot et al, Medical Teacher 33:370-383). It should be done by different assessors on different clinical situations. The recommended frequency is at least once every three months.

### How is MiniCEX documented?

MiniCEX will be recorded in the form in Appendix 2.

## 9.3. Case Based Discussion (CbD)

### What is CbD?

CbD is a structured exercise where a trainee discusses a case he encountered, focusing on clinical reasoning, decision making and ethical consideration. It is usually not done in the presence of the actual patients.

The trainee would present a case to the trainer. The trainer will then ask questions to probe the trainee's application of knowledge, clinical reasoning and professional judgement. They may also discuss areas of uncertainty in management, if any.

### How many types of CbD are there?

There are two kinds. One for **General Paediatrics** and another specifically designed for **Safeguarding** (domain 9).

### How long does a CbD usually take?

Typically, a General Paediatrics CbD will take 30 minutes, inclusive of feedback time. A Safeguarding CbD will take up to 60 minutes.

### How many times need it be done?

The Working Group recommends 1 to 3 Safeguarding CbD in Basic training and another 1 to 3 in Higher training.

A trainee can do about 6 General Paediatrics CbD per year of training, but the Working Group thinks quality is more important than quantity. The recommended frequency is at least once per 3 months.

### How is CbD documented?

CbD will be recorded in the forms in Appendix 3 (for General Paediatrics) and Appendix 4 (for Safeguarding).

## **9.4. Paediatric Multisource Feedback (PaedMSF)**

### **What is PaedMSF?**

The PaedMSF we propose is modified from the Sheffield Peer Review Assessment Tool and the RCPCH Paediatric MSF. It is a systematic assessment of a trainee across a wide range of competences and capabilities by assessors who know the trainee.

### **Who are the assessors?**

At this stage the Working Group propose that only doctors who are in regular encounter with the trainee should complete the PaedMSF (In other countries, all colleagues at work can be the assessors, including nurses, therapists). The assessors can be the trainee's seniors, peers and juniors. The trainee is responsible for nominating the assessors.

### **How many times need it be done?**

The Working Group recommends that PaedMSF should be done annually.

### **How long does it take to complete an assessment?**

The PaedMSF is divided into six parts. Questions are lumped together into six categories. We expect an assessment to be completed in 15 to 20 minutes. You can take a look at the **PaedMSF form** by clicking the button below.

### **What if the assessor gave biased or potentially damaging feedbacks?**

The PaedMSF comes with an instruction requesting all assessors to give constructive feedbacks. Also a minimum of seven replies are required for a valid assessment, thus extreme assessments will balance out each other. Feedbacks are anonymous. A trainee is strongly encouraged to discuss the assessment with his trainers or supervisors.

### **How is PaedMSF documented?**

PaedMSF will be recorded in the form in Appendix 5.

## 9.5. Assessment Grid

	Professional values and behaviour	Communication	Procedures	Patient Management	Health Promotion and Illness Prevention	Leadership and Team Working	Patient safety and Safe Prescribing	Quality Improvement	Safeguarding	Education and Training	Research
Trainer's Report	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>
MRCPCH FOP	<b>S</b>			<b>P</b>	<b>S</b>		<b>S</b>	<b>S</b>	<b>S</b>		<b>S</b>
MRCPCH TAS	<b>S</b>			<b>P</b>	<b>S</b>		<b>S</b>	<b>S</b>	<b>S</b>		<b>S</b>
MRCPCH AKP	<b>S</b>			<b>P</b>	<b>S</b>		<b>S</b>	<b>S</b>	<b>S</b>		<b>S</b>
MRCPCH Clinical		<b>P</b>	<b>P</b>	<b>P</b>		<b>S</b>	<b>S</b>		<b>S</b>		
DOPS	<b>S</b>	<b>S</b>	<b>P</b>	<b>S</b>			<b>S</b>				
MiniCex	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>S</b>	<b>P</b>	<b>P</b>		<b>S</b>	<b>S</b>	
CbD	<b>P</b>	<b>P</b>		<b>P</b>	<b>S</b>	<b>S</b>	<b>P</b>		<b>S</b>	<b>S</b>	
Safeguarding CbD	<b>P</b>	<b>P</b>		<b>P</b>		<b>P</b>	<b>S</b>		<b>P</b>		
PaedMSF	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>
Exit Assessment	<b>P</b>	<b>S</b>	<b>S</b>	<b>P</b>	<b>S</b>	<b>S</b>	<b>S</b>	<b>P</b>	<b>S</b>	<b>P</b>	<b>P</b>

### Legend

P - Primary Assessment Domain

S - Supplementary Assessment Domain

FOP - Foundation of Practice Examination

TAS - Theory and Science Examination

AKP - Applied Knowledge in Practice Examination

DOPS - Directly observed Procedural Skills

MiniCex - Mini Clinical Evaluation Exercise

CbD - Case based discussion

PaedMSF - Paediatric Multisource Feedback

## 10. Future directions

### Regular reviews

The Working Group recommends that the curriculum should be reviewed regularly every \_\_\_\_\_ years. This is to update any parts of the curriculum, including the domains, the syllabuses and the formative assessment tools to keep them abreast with the latest development in the global trend of training and the need of the local population

### Increased flexibility of training

There is a need to a more flexible training program in face of falling paediatric population and the increasing sophisticated health requirement of the young population. The training programme should allow more flexible training trajectory and allowing more community-based training opportunity.

### Special Interest Modules and Subspecialty Training

These training usually follows the completion of General Paediatric Training of six years. At present there is a one-year overlap permitted between Higher training and Subspecialty Training. This arrangement will remain unchanged at the present time. The potential development of Special Interest Modules in various subspecialties will likely have the same allowance of one-year overlap with Higher training



# 11. APPENDICES

- Appendix 1 – Directly Observed Procedural Skills Form
- Appendix 2 – Mini Clinical Evaluation Exercise Form
- Appendix 3 – Case Based Discussion (General Paediatrics) Form
- Appendix 4 – Case Based Discussion (Safeguarding) Form
- Appendix 5 – Paediatric Multisource Feedback Form

## 11.1 Directly Observed Procedural Skills (DOPS) Form



# Hong Kong College of Paediatricians

## Directly Observed Procedural Skills (DOPS)

Trainee name:

Trainee ID:

Date of assessment:

Trainer name:

Time taken for observation and feedback:

Procedure:

Brief Case Summary:

Is this a simulation (Note: simulation is acceptable in designated procedures only)? Yes / No

Domains evaluated	Level (1,2 or 3)
Domain 1 : Professional values and behaviour	
Domain 2: Communication	
<b>Domain 3: Procedure (including knowledge on indication, anatomy, technique, demonstrate appropriate preparation pre-procedure; appropriate analgesia or sedation; technical ability including aseptic technique; post-procedure management)</b>	
Domain 4: Patient management	
Domain 7: Patient Safety	
<b>Level</b>	
<b>3</b>	Above expectation
<b>2</b>	Meets the standard for the level of training
<b>1</b>	Needs improvement

**Overall ability to perform the procedure**

- Competent to perform unsupervised (entrustable)
- May need assistance if complications arise
- Need more practice (not yet entrustable)

**Feedback**

1. What aspects were done well (that provides evidence towards entrustment)?

2. Suggestions for improvement

3. Agreed action / goals

**Procedures for Basic trainees**

Compulsory	Compulsory procedures that may use simulation as alternative
Infection control measures	Use of automated external defibrillators
Aseptic technique	Intraosseous needle insertion
Blood taking	Use of epinephrine auto-injector
Heel prick	Chest tap and chest tube insertion
Intradermal injection	
Subcutaneous injection	
Intravenous injection	
Intramuscular injection	
Peripheral venous cannulation	
Peripheral arterial cannulation	
Umbilical venous and arterial cannulation	
Lumbar puncture	
Measuring peak flow rate	
Advanced airway support – including tracheal intubation, replacement of tracheostomy tube and bagging	
Replacement of tracheostomy tube	
Blood culture collection	
Bladder catheterization	
Red Reflex Examination	
ECG performance and interpretation	
<b>Procedure for Higher trainees</b>	
Compulsory	Compulsory procedures that may use simulation as alternative
Point-of care ultrasound (e.g. ultrasound head examination, ultrasound guided vascular cannulation)	Exchange transfusion

**Domain 3 Procedures**

**Basic Training**

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Carry out clinical examinations with appropriate adaptations for CYP of different growth and developmental stages.</li> <li>2. Carry out basic clinical procedures with appropriate adaptation and troubleshooting for CYP under a range of situations</li> </ol>	<ol style="list-style-type: none"> <li>1. Perform basic and advanced paediatric life support and neonatal resuscitation.</li> <li>2. Recognize and take prompt and appropriate procedures when the child's well-being, safety, dignity or comfort is being compromised.</li> <li>3. Perform developmental assessment of CYP and appreciate normal variations in growth and development</li> <li>4. Perform the following essential procedures:</li> </ol>	<ol style="list-style-type: none"> <li>1. Complete the training of the necessary skills of a basic trainee.</li> <li>2. Take care to ensure the dignity and comfort of CYP when performing clinical procedures</li> <li>3. Take prompt and appropriate actions when the CYP's well-being, safety, dignity or comfort is being compromised</li> <li>4. Explain the indication, side effect and possible complications of common procedures to the CYP and family</li> </ol>

**Higher Training**

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Supervise and assess junior staff undertaking clinical procedures, and manage complications arising from the procedures.</li> <li>2. Demonstrate competence in performing independently a wider range of advanced procedural skills that are required in the practice of paediatrics and their chosen subspecialties.</li> <li>3. Recognize the situation that requires the advanced or specialized skills of other health professionals and to employ their skills.</li> </ol>	<ol style="list-style-type: none"> <li>1. Perform the following essential procedures during higher training:</li> </ol>	<ol style="list-style-type: none"> <li>1. Supervise junior staff in essential clinical procedures with appropriate guidance and teaching.</li> <li>2. Decide alternative strategy when the procedures are contraindicated or refused.</li> </ol>

## **11.2 Mini Clinical Evaluation Exercise (MiniCEX) Form**



# Hong Kong College of Paediatricians

## Mini Clinical Evaluation Exercise (MiniCEX)

Trainee name:

Trainee ID:

Date of assessment:

Trainer name:

Time taken for observation and feedback:

Setting: In-patient / Out-patient / Community

Case Complexity: Low / Medium / High

Brief Case Summary:

Domains evaluated	Level (1, 2, 3, Not Observed)
Domain 1 : Professional values and behaviour	
Domain 2: Communication	
Domain 3: Procedure	
Domain 4: Patient management	
Domain 5: Health Promotion and Illness Prevention	
Domain 6: Leadership and Team working	
Domain 7: Patient Safety	
<b>Level</b>	
<b>3</b>	Above expectation
<b>2</b>	Meets the standard for the level of training
<b>1</b>	Needs improvement
<b>Not Observed</b>	Trainee's performance at this domain cannot be observed due to the nature of the case

**Feedback**

4. What aspects were done well (that provides evidence towards entrustment)?

5. Suggestions for improvement

6. Agreed action / goals

## Domain 1 - Professional Values & Behaviour

### Basic Training

Learning Outcome	Key Capabilities	Illustrations
5. Be committed to excellence, service, honour, integrity and respect of others.	5. Act with altruism, accountability and responsibility.	9. Recognize and manage common paediatric emergency and non-emergency conditions,
6. Take the interest and welfare of children as the first and most important consideration.	6. Respect the autonomy of CYP and their families in making informed decisions about medical care and assess their competence in doing so	10. Explain management plans to CYP and families, involving them in decision making
7. Apply the knowledge of growth and development in the holistic care of Children and Young Persons (CYP).	7. Foster constructive working relationships with healthcare professionals, CYP and their families taking into account of the effect of different cultural and religious backgrounds on patient care	11. Obtain consent for common procedures by explaining the procedure, benefits, risks and potential complications
8. Demonstrate insight and recognize the limits of their capabilities in common emergency and non-emergency paediatric conditions.	8. Reflect on one's own work	12. Demonstrate the understanding of how the developing physiology, anatomy and psychology affect the care of CYP.
		13. Assess psychological and mental issues of CYP and refer to appropriate health professionals
		14. Seek help and advice from seniors and colleagues when encountering difficulty in patient management
		15. Make appropriate referrals to healthcare professionals for assessment and treatment
		16. Understand the importance of confidentiality in patient care.

### Higher Training

Learning Outcome	Key Capabilities	Illustrations
3. Act in a way that is safe, appropriate and does no harm to the patients when handling a broad range of common paediatric conditions and emergencies as an independent clinician	3. Apply knowledge of the principle of medical ethics and current local legislation related to the care of children and families	6. Apply management guidelines in daily work when appropriate
4. Act as an example to junior colleagues in upholding professional and personal integrity	4. Manage more difficult clinical conditions and complex situations, seeking help when appropriate.	7. Research for legal and ethical guidelines to support their work
		8. Understand the local legislation regarding the welfare of CYP.
		9. Understand medical ethics pertaining to palliative care, end-of-life care and resolve situations where the beliefs of the CYP or the family may affect patient care.
		10. Advise junior colleagues when making difficult decisions and handling patient complaints

## Domain 4 - Patient Management

### Basic Training

Learning Outcome	Key Capabilities	Illustrations
4. Perform comprehensive history taking, physical examination and investigations and give due consideration of personal factors of the CYP	4. Recognize emergency and serious situations of physical and mental health in CYP and intervene appropriately	6. Demonstrate the accurate formulation of problems, recognizing the breadth of different presentations of disorders.
5. Devise a safe management plan of common paediatric problems at hospital and community settings based on knowledge and sound clinical reasoning	5. Apply local and international guidelines in the management of common paediatric problems	7. Present and discuss patient management in a team to demonstrate understanding of the patient's situation
6. Refine differential diagnosis and tailor management plans in response to the patient's needs and clinical progress	6. Adapt the best evidence-based clinical practice for paediatric problems if guideline is lacking	8. Interpret common laboratory and radiological findings and explain them to the parents.
		9. Diagnose and manage the common important causes of mortality and morbidity in CYP, for instance, common airway and respiratory emergencies, shock, status epilepticus and cardiac arrhythmias.
		10. Recognize maltreatment of children

### Higher Training

Learning Outcome	Key Capabilities	Illustrations
4. Recognize, investigate, initiate and continue the management of a wider range of acute and chronic conditions in the outpatient setting when possible	3. Collaborate with other clinicians, specialists, allied health professionals and health-related agencies in patient management in a multidisciplinary setting	5. Explain and discuss with patients and families for the process of transition to adult care. Collaborate with adult physicians and concerned health discipline to facilitate the transition.
5. Consider a wider range of treatment and management options available, including new therapies, relevant to paediatrics and their chosen subspecialties	4. Plan the return of patients with medical complexities to community and home care	6. Recognize rare but important emergency conditions in various subspecialties, especially in the subspecialty of the trainee's choice.
6. Anticipate and determine the need for transition of patient to other specialties or treatment settings, including the transition to adult care, and plan accordingly		7. Explain the rationale to consider escalation of treatment to the family when the need arises
		8. Work with nurses and other professionals in the arrangement of home care of chronic patients.

## 11.3 Case Based Discussion (CbD General Paediatrics) Form



# Hong Kong College of Paediatricians

## Case Based Discussion (General Paediatrics)

Trainee name:

Trainee ID:

Date of assessment:

Trainer name:

Time taken for observation and feedback:

Case subspecialty area:

Clinical setting: In-patient / Out-patient

Brief Case Summary:

Areas evaluated		Level (1, 2, 3 or Not Observed)
Medical Record Keeping		
Clinical Assessment and reasoning		
Investigations appropriateness		
Referral appropriateness		
Treatment appropriateness		
Risk assessment of the patient		
Management of challenging and complex situations		
Overall Clinical Care		
Domains evaluated		Level (1, 2, 3 or Not Observed)
Domain 1 : Professional values and behaviour		
Domain 2: Communication		
Domain 4: Patient management		
Domain 5: Health promotion		
Domain 6: Leadership and Team working		
Domain 7: Patient Safety		
Domain 9: Safeguarding		
Domain 10: Education and training		
Level		
3	Above expectation	
2	Meets the standard for the level of training	
1	Needs improvement	
Not Observed	Trainee's performance at this domain cannot be observed due to the nature of the case	
<b>Satisfaction rating of this CbD</b>		<b>Level (1, 2, 3)</b>
Trainee		
Trainer		

Feedback	
1. What aspects were done well (that provides evidence towards entrustment)?	
2. Suggestions for improvement (mandatory if the rating is 0 in any of the domains)	
3. Agreed action / goals	

#### Domain 4 - Patient Management

##### Basic Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Perform comprehensive history taking, physical examination and investigations and give due consideration of personal factors of the CYP</li> <li>2. Devise a safe management plan of common paediatric problems at hospital and community settings based on knowledge and sound clinical reasoning</li> <li>3. Refine differential diagnosis and tailor management plans in response to the patient's needs and clinical progress</li> </ol>	<ol style="list-style-type: none"> <li>1. Recognize emergency and serious situations of physical and mental health in CYP and intervene appropriately</li> <li>2. Apply local and international guidelines in the management of common paediatric problems</li> <li>3. Adapt the best evidence-based clinical practice for paediatric problems if guideline is lacking</li> </ol>	<ol style="list-style-type: none"> <li>1. Demonstrate the accurate formulation of problems, recognizing the breadth of different presentations of disorders.</li> <li>2. Present and discuss patient management in a team to demonstrate understanding of the patient's situation</li> <li>3. Interpret common laboratory and radiological findings and explain them to the parents.</li> <li>4. Diagnose and manage the common important causes of mortality and morbidity in CYP, for instance, common airway and respiratory emergencies, shock, status epilepticus and cardiac arrhythmias.</li> <li>5. Recognize maltreatment of children</li> </ol>

##### Higher Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>1. Recognize, investigate, initiate and continue the management of a wider range of acute and chronic conditions in the outpatient setting when possible</li> <li>2. Consider a wider range of treatment and management options available, including new therapies, relevant to paediatrics and their chosen subspecialties</li> <li>3. Anticipate and determine the need for transition of patient to other specialties or treatment settings, including the transition to adult care, and plan accordingly</li> </ol>	<ol style="list-style-type: none"> <li>1. Collaborate with other clinicians, specialists, allied health professionals and health-related agencies in patient management in a multidisciplinary setting</li> <li>2. Plan the return of patients with medical complexities to community and home care</li> </ol>	<ol style="list-style-type: none"> <li>1. Explain and discuss with patients and families for the process of transition to adult care. Collaborate with adult physicians and concerned health discipline to facilitate the transition.</li> <li>2. Recognize rare but important emergency conditions in various subspecialties, especially in the subspecialty of the trainee's choice.</li> <li>3. Explain the rationale to consider escalation of treatment to the family when the need arises</li> <li>4. Work with nurses and other professionals in the arrangement of home care of chronic patients.</li> </ol>

## **11.4 Case Base Discussion (CbD Safeguarding) Form**



# Hong Kong College of Paediatricians Case Based Discussion (Safeguarding)

**Trainee name:**

**Trainee ID:**

**Date of assessment:**

**Trainer name:**

**Time taken for observation and feedback:**

**Case subspecialty area:** Safeguarding

**Clinical setting:** In-patient / Out-patient

Brief Case Summary:

Areas evaluated	Level (1 ,2, 3 or Not Observed)
Medical Record Keeping	
Clinical Assessment and recognition of warning signs	
Risk Assessment	
Psychological Assessment	
Investigation appropriateness	
Communication with patients, parents and caregivers	
Referral appropriateness	
Interdisciplinary communication	
Initiating and leading MDCC	
Writing of medical report for MDCC and court procedures	
Application of local safeguarding guidelines	
Welfare planning	
Follow up arrangement	
Domains evaluated	Level (1, 2, 3 or Not Observed)
<b>Domain 1 : Professional values and behaviour</b>	
<b>Domain 2: Communication</b>	
<b>Domain 4: Patient management</b>	
Domain 5: Health promotion	
Domain 6: Leadership and Team working	
<b>Domain 7: Patient Safety</b>	
Domain 9: Safeguarding	
Level	
<b>3</b>	Above expectation
<b>2</b>	Meets the standard for the level of training
<b>1</b>	Needs improvement
<b>Not Observed</b>	Trainee's performance at this domain cannot be observed due to the nature of the case

Feedback	
1. What aspects were done well (that provides evidence towards entrustment)?	
2. Suggestions for improvement (mandatory if the rating is 0 in any of the domains)	
3. Agreed action / goals	

Satisfaction rating of this CbD	Level (1, 2, 3)
Trainee	
Trainer	

## Domain 9 - Safeguarding

### Basic Training

Learning Outcome	Key Capabilities	Illustrations
<ol style="list-style-type: none"> <li>Understand and uphold the professional responsibility of safeguarding CYP</li> <li>Document any safeguarding concern, alert senior staff of such concern and seek advice and guidance.</li> <li>Understand the long term impact of child maltreatment and other adverse childhood experiences.</li> </ol>	<ol style="list-style-type: none"> <li>Recognize presenting features of children where child protection issue may be a concern.</li> <li>Recognize vulnerable children and distressed families that need assistance or intervention</li> <li>Apply knowledge on how to act in cases of suspected child maltreatment</li> <li>Apply knowledge of local multidisciplinary procedures for CYP in need of safeguarding support, including adoption and foster care.</li> <li>Document clearly and accurately all examination results, assessment and communication relating to possible safeguarding issues.</li> <li>Provide oral or written reports for welfare meetings, multidisciplinary case conferences and produce written reports for the police, social service or court hearings under supervision.</li> <li>Participate actively in multidisciplinary conference and welfare meetings</li> </ol>	<ol style="list-style-type: none"> <li>Apply knowledge to recognise the diversity of physical signs and symptoms that might indicate or mimic child abuse, including skin injury and genital warts</li> <li>Recognise that frequent emergency department attendance may be a presentation of child abuse and/or neglect</li> <li>Recognise that behaviour changes, including soiling and/or bed wetting, can be a presentation of psychological abuse or neglect.</li> <li>Recognise the health indicators of possible neglect, including failure to meet the child's routine health needs, school absence and severe, untreated dental caries.</li> <li>Identify the presenting features of possible abusive head trauma in infants and knows the conditions that might mimic such presentations (e.g. inherited metabolic disorder).</li> <li>Recognise the risk factors which contribute to vulnerability, including disability in children, maternal mental illness, parental substance abuse and teenage parents.</li> <li>Recognise the risk factors for maltreatment in the unborn child (e.g. maternal substance abuse, maternal mental illness)</li> <li>Apply knowledge of the principles and practice of latest local guideline in handling of case of suspected child maltreatment (e.g. Protecting children from maltreatment - procedural guide for multidisciplinary cooperation)</li> <li>Employ and interpret investigations in suspected child maltreatment e.g. blood tests, skeletal X ray</li> </ol>

**Higher Training**

Learning Outcome	Key Capabilities	Illustrations
<p>1. Lead independently the detection, assessment, reporting and decision making in the safeguarding of CYP</p>	<ol style="list-style-type: none"> <li>1. Handle with sensitivity the disclosure and any need to escalate action regarding case with possible safeguarding issue</li> <li>2. Follow the established guidelines and procedures in the identification, assessment, referral and follow-up of CYP who may have been sexually abused.</li> <li>3. Initiate and take part in the comprehensive multidisciplinary assessment of the developmental, physical and psychological status and the family function of CYP who have been possibly maltreated and draw up a conclusion about the nature of the case.</li> <li>4. Provide oral or written reports for welfare meetings, multidisciplinary case conferences and produce written reports for the police, social service or court hearings independently.</li> <li>5. Assess the role of a Paediatrician as it relates to those of other professionals in the management of children in need of protection and ensure suitable follow-up</li> </ol>	<ol style="list-style-type: none"> <li>1. Obtain valid consent for examination in the case of suspected abuse</li> <li>2. Identify the risk factors, and physical and behavioural indicators for child sexual abuse (e.g. missing from home or school and presenting with a controlling adult).</li> <li>3. Apply knowledge of the local referral pathways for child sexual abuse</li> <li>4. Respond to the safeguarding needs of the unborn child, including in families with domestic violence, or maternal substance abuse.</li> <li>5. Respond to the safeguarding needs of vulnerable children in high risk family by proper referral for support, comprehensive assessment, risk assessment and welfare planning</li> <li>6. Participate and lead in the management of children in need of protection, and uses local pathways to ensure referral and follow-up.</li> <li>7. Understand the principles of forensic examination and recognize the importance of the chain of evidence</li> <li>8. Recognise when additional expert advice is needed (e.g. radiology, orthopaedics, neurology and ophthalmology, psychiatry or clinical psychology)</li> </ol>

## **11.5 Paediatric Multisource Feedback (PaedMSF) Form**



# Hong Kong College of Paediatricians

## Paediatric Multisource Feedback (PaedMSF)

### Preamble

Formative assessment is an important element in the proposed curriculum review. To obtain an all-round assessment of all eleven domains of trainee competence, feedback from people who have regular contact with the trainee at the workplace is an important tool.

The Sheffield Peer Review Assessment Tool is a validated tool used by HA and RCPCH to collect such feedback. The Working Group recommends that the Paediatric Multisource feedback (PaedMSF) be based on the tool, and modified to enhance acceptance and give clarity how the tool should be used.

The main modifications are aimed at matching the assessment to the appropriate domains and also the use of yes-no answer instead of a grading. Feedbacks for areas where a trainee does not meet the standard would be required.

### Instruction to trainees

- (1) The PaedMSF is a formative assessment aiming to gather feedbacks from your colleagues and co-workers. It is not a summative assessment. One assessment is required for each year of training until you successfully passed the exit assessment to fellowship.
- (2) PaedMSF aims at promoting self-reflection and encourage improvement.
- (3) PaedMSF is matched to the domains in the curriculum statement
- (4) You are required to nominate up to 15 medical colleagues to complete the assessment. These people should be in contact with you in the past six to 12 months so that they have a good knowledge how you perform in the workplace. About 50% of your nominations should be your seniors, and the other 50% should be your peers or juniors. Your trainers during the past 6 to 12 months should be nominated, and at least one nominee should be in the consultant grade.
- (5) A minimum of 7 feedbacks are required for a meaningful report. You may be required to nominate more assessors if the minimum requirement is not reached.
- (6) You are encouraged to discuss the report with your trainers in ways to improve in deficient areas.
- (7) The assessors are requested to provide constructive feedback based on their professional encounters with you. However there are times when some personal and potentially damaging feedbacks are provided. Please seek assistance from your trainer or training supervisor when you encounter difficulty dealing with the feedback. Feedbacks should be viewed in a neutral manner without the emotional overtone that they may carry.

### Instruction to Assessors

- (1) You are invited to provide feedback based on your regular professional interaction with a paediatric trainee during daily work.
- (2) The assessment is anonymous.
- (3) Please finish and submit your assessment within 4 weeks after you receive the invitation.
- (4) You are kindly asked to provide an assessment if the trainee consistently demonstrated the competence that is expected at one's level of training.
- (5) A "Yes/No" answer to a group of questions would be required. You should answer "no" if the trainee does not consistently perform at or above standard at any one of the questions in the group.
- (6) If your answer is a "yes", you are encouraged to provide an optional feedback in areas the trainee excels or performs above expectation. This will be particularly encouraging to the trainee.
- (7) If your answer is a "no", please provide feedback in the deficient areas and suggest ways to improve. Please be specific, constructive and sensitive. Your feedbacks will be shown to the trainee unabridged.



# Hong Kong College of Paediatricians

## Paediatric Multisource Feedback (PaedMSF)

**Trainee name:**

**Trainee ID:**

**E-mail address:**

**Basic trainee (Year \_\_\_\_\_) / Higher trainee (Year \_\_\_\_\_)**

**Date of assessment:**

**Name and E-mail address of the training supervisor at your institution:**

### ASSESSOR NOMINATION

Name	E-mail address	Position (Consultant, AC, RS or Resident with year of training)
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		



# Hong Kong College of Paediatricians

## Paediatric Multisource Feedback (PaedMSF)

### **Paediatric Multisource Feedback – Assessment Form**

Name of assessor (will be anonymized):

Your College ID (e.g. fellowship number):

Name of trainee:

Year of Training:

Basic training / Higher training (Year \_\_\_\_\_)

In what environment have you interacted with the trainee? (Choose one) :

HA Paediatric Training Unit / DH Paediatric Training Unit / Non-paediatric training unit

Your position (Choose one) : Consultant / AC / RS / Trainee at year \_\_\_\_\_ / Others

For how long have you known the trainee: \_\_\_\_\_ months



# Hong Kong College of Paediatricians

## Paediatric Multisource Feedback (PaedMSF)

### Paediatric MSF

#### Section 1 - Good Clinical Care (Mapped to Domains 1, 4, 6, 7, 9)

Has the trainee **consistently** performed at a level that is commensurate or above the expectation of a trainee at his / her training level?

Areas evaluated	
1. Able to diagnose patients' problems	
2. Able to formulate appropriate management plans	
3. Able to manage complex patients	
4. Able to respond to psychological aspects of illness	
5. Able to utilize resources appropriately e.g. ordering investigations	
6. Able to assess the risks and benefits when treating patients	
7. Able to coordinate patient care	
8. Be aware of one's own limitation	
9. Be committed to the safeguarding of children and families at risk	
<b>Assessment</b>	
YES (in all nine areas)	<input type="checkbox"/>
NO (in one or more aspects)	<input type="checkbox"/>
If the answer is yes, please provide optional feedback where the trainee has done exceptionally well, if any.	
If the answer is no, please provide feedback on the ways to improve on the deficient area(s).	



# Hong Kong College of Paediatricians

## Paediatric Multisource Feedback (PaedMSF)

### Paediatric MSF

#### Section 2 - Maintaining Good Clinical Practice (Mapped to Domains 1, 3, 4, 8, 11)

Has the trainee **consistently** performed at a level that is commensurate or above the expectation of a trainee at his / her training level?

Areas evaluated	
1. Demonstrate proficiency in performing the technical skills required e.g. drip setting, lumbar puncture	
2. Able to apply up-to-date knowledge or evidence-based medicine	
3. Able to manage time or prioritize effectively	
4. Able to deal with stress	
5. Be committed to the continuous improvement of quality of care both at the personal and institutional aspect	
<b>Assessment</b>	
YES (in all five areas)	<input type="checkbox"/>
NO (in one or more aspects)	<input type="checkbox"/>
If the answer is yes, please provide optional feedback where the trainee has done exceptionally well, if any.	
If the answer is no, please provide feedback on the ways to improve on the deficient area(s).	



# Hong Kong College of Paediatricians

## Paediatric Multisource Feedback (PaedMSF)

### Paediatric MSF

#### Section 3 - Teaching, training, appraising and assessing (Mapped to Domains 1, 6, 10)

Has the trainee **consistently** performed at a level that is commensurate or above the expectation of a trainee at his / her training level?

Areas evaluated	
1. Be committed to continued learning	
2. Be willing and effective when teaching or training colleagues	
3. Able to give feedback that is honest, supportive and private when necessary	
<b>Assessment</b>	
YES (in all three areas)	<input type="checkbox"/>
NO (in one or more aspects)	<input type="checkbox"/>
If the answer is yes, please provide optional feedback where the trainee has done exceptionally well, if any.	
If the answer is no, please provide feedback on the ways to improve on the deficient area(s).	



# Hong Kong College of Paediatricians

## Paediatric Multisource Feedback (PaedMSF)

### Paediatric MSF

#### Section 4 – Relationship with patients (Mapped to Domains 1, 2, 5)

Has the trainee **consistently** performed at a level that is commensurate or above the expectation of a trainee at his / her training level?

Areas evaluated	
1. Able to communicate with patients (children and young people)	
2. Able to communicate with carers and family	
3. Shows respect for patients and their right to confidentiality	
<b>Assessment</b>	
YES (in all three areas)	<input type="checkbox"/>
NO (in one or more aspects)	<input type="checkbox"/>
If the answer is yes, please provide optional feedback where the trainee has done exceptionally well, if any.	
If the answer is no, please provide feedback on the ways to improve on the deficient area(s).	



# Hong Kong College of Paediatricians

## Paediatric Multisource Feedback (PaedMSF)

### Paediatric MSF

#### Section 5 - Working with Colleagues (Mapped to Domains 1, 2, 6)

Has the trainee **consistently** performed at a level that is commensurate or above the expectation of a trainee at his / her training level?

Areas evaluated	
1.	Give clear and effective verbal communication to colleagues
2.	Give clear and effective written communication to colleagues
3.	Able to recognize the value and contribution of others
4.	Being accessible and reliable (trustworthiness)
5.	Demonstrate effective leadership skills
6.	Demonstrate effective management skills
<b>Assessment</b>	
YES (in all six areas)	<input type="checkbox"/>
NO (in one or more aspects)	<input type="checkbox"/>
If the answer is yes, please provide optional feedback where the trainee has done exceptionally well, if any.	
If the answer is no, please provide feedback on the ways to improve on the deficient area(s).	



# Hong Kong College of Paediatricians

## Paediatric Multisource Feedback (PaedMSF)

### Paediatric MSF

#### Section 6 - Overall Assessment

Overall, how do you rate this doctor compared to other doctors at the same level of training?

Above Expectation

Meets expectation

Borderline

Below expectation

Significantly below expectation

Do you have any concern about the integrity / uprightness of this doctor?

YES (Please state your concern below)

NO

If the answer is yes, please explain the concern you have

Please use the space below for any additional comment



# Hong Kong College of Paediatricians

## Paediatric Multisource Feedback (PaedMSF)

### Domain Mapping of PaedMSF

Domains	Section				
	1	2	3	4	5
1 - Professional values and behaviour	√	√	√	√	√
2 - Communication				√	√
3 - Procedures		√			
4 - Patient management	√	√			
5 - Health Promotion and Illness Prevention				√	
6 - Leadership and Team Working	√		√		√
7 - Patient safety (including safe prescribing)	√				
8 - Quality Improvement		√			
9 – Safeguarding	√				
10 - Education and Training			√		
11 – Research		√			

## **12. Working Group on Curriculum Review**

### **CHAIRPERSONS**

Dr Winnie Tse

Dr Shun Ping Wu (from 2020)

### **HONORARY SECRETARY**

Dr Wai Hong Lee (2019-2021)

Dr Carrie Kwok (2021 - 2022)

Dr Joanna Yuet Ling Tung (2022 - )

### **MEMBERS**

Dr Amy Chan

Dr Bill Chan

Dr Sophelia Chan

Dr Stephen Chan

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Dr Zita Hung

Dr Albert Ku

Dr Carrie Kwok

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Dr Ming Kut Tay

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