

# **Hong Kong College of Paediatricians**

## **The Subspecialty of Developmental-Behavioural Paediatrics**

### **Description**

Developmental-Behavioural Paediatrics (DBP) is a discipline of Paediatrics that deals with the evaluation, treatment and management of children with or at risk for developmental, learning, emotional and behavioural problems, through an understanding of underlying biological and social factors, and delivered in context of the children's lives and families. It emphasizes evidence based practice, multidisciplinary and cross sector collaboration, and aims to promote the optimal development and behavioural health of all children.

「兒童體智及行為發展學科」

「兒童體智及行為發展學科」是兒科中之專科，透過瞭解有成長發展、學習、情緒及行為障礙或風險兒童的生理和社交因素，以及就著他們的生活和家庭情況，作出評估，診斷和治療。此專科強調以實證為基礎的守則，及跨專業、跨界別的合作模式，並致力促進兒童的最佳發展及行為健康。

### **Definition of DBP as a Subspecialty**

DBP is a distinctive subspecialty within Paediatrics, under supervision, censorship and governance by the Hong Kong College of Paediatricians.

DBP cares for children with typical development, those who are at risk for developmental and behavioural problems because of medical conditions and adverse environments, and children with developmental, mental health disorders and medically complex disabilities. These children range from neonates to adolescents, may have congenital or acquired problems, and may be seen within hospitals, clinics or community settings.

DBP focuses on children's development and behaviour in the context of their families, schools and communities. It is grounded on the neuroscientific underpinnings of the disorders, and the evidence for their management.

The DB Paediatrician provides evaluation, investigation, counseling, treatment and management for the range of developmental, learning and behavioural difficulties, and connects the children and their families with community resources and services. The approach is family-centred, culturally sensitive and multidisciplinary, and is delivered in collaboration with the children and their families.

DBP is a field that integrates paediatrics, related medical specialties, education, social systems and policies. Its roles include interdisciplinary clinical practice, academic medicine, research and teaching. Through training and continuing medical education, developmental-behavioural paediatricians contribute to educating professionals, shaping collaborative community leadership, and informing public policy to promote the optimal development and behavioral health of all children.

The DBP subspecialty shares with the specialty of Paediatrics in the basic and higher training in Paediatrics. Further training or accreditation in the subspecialty requires the status of a recognized specialist holding the qualification of FHKAM (Paediatrics) or its equivalent.

The DBP subspecialty training programme comprises a 3-year training programme. Eligible candidates must have completed 3 years basic training in general paediatrics and have passed the Joint MRCPCH (UK) / Hong Kong College of Paediatricians Intermediate Examination. During their higher training in general paediatrics they are eligible to receive up to one year of DBP subspecialty training experience with the approval of the DBP Subspecialty Board.

## **The DBP Training Programme**

### **Programme Goals**

To enable the Developmental-Behavioural Paediatrics trainee to:

- ◆ Provide specialized care to children with respect to their developmental and psychosocial well-being.
- ◆ Understand child development and behaviour, both normal and abnormal, spanning the full age range from prenatal period to late adolescence, including theoretical foundations, research application in DBP, professional education and health advocacy.

- ◆ Be a competent clinical expert, collaborator across professionals and sectors, and manager for DBP activities within the service delivery system.

## **Programme Objectives**

To enable the DB Paediatrician trainee to:

- a. Have in-depth knowledge of normal and abnormal physical, sensory, motor, language, cognitive and social/ emotional development, including underlying theoretical frameworks and processes.
- b. Possess understanding of the epidemiology, genetic and other risk factors of developmental disorders.
- c. Develop and evaluate screening, surveillance and early identification programmes.
- d. Have communication skills that are culturally sensitive, developmentally appropriate and family focused, and ability to share information in discussions, presentations or in writing with related disciplines and sectors over many situations, including on clinical, professional and policy matters.
- e. Possess knowledge and skills in identification and assessment for the entire range of problems, for defining biological and psychosocial aetiologies and guiding management decisions.
- f. Extend beyond reaching a medical diagnosis, integrating multiple domains of interactive influences in formulating a comprehensive profile.
- g. Recognize urgency of problems and appropriate timing for intervention.
- h. Have theoretical understanding of and practical experience with intervention strategies in medical, educational and social domains, and personal skills in therapeutic modalities including guidance, counseling, behavioural treatment methods and basic psychopharmacotherapy for developmental behavioural disorders, and techniques in neurorehabilitation.

- i. Have understanding of the interdisciplinary process, including knowing the conceptual frameworks and methods used by other medical and allied health professionals and disciplines (psychiatry, psychology, linguistics / speech and language pathology, neurorehabilitation therapists, nutritionists, social workers, and others) and sectors (e.g. special education, social welfare), and to equip them with abilities to function in a leadership role on these interdisciplinary, multisectoral teams.
- j. Understand culturally diverse populations and the impact of developmental and behavioural problems on families from varied social and economic backgrounds.
- k. Make scientific and evidence-based judgments through an understanding of research methodology and use of critical appraisal techniques on current important research issues in the field, and ability to develop, write funding proposals for, and complete a research project.
- l. Understand determinants of developmental health, and its application to public policy, to develop an attitude of advocacy, and an ability to advocate change beyond the office walls that impacts on children with special developmental needs.
- m. Be familiarized with existing legislation, changing concepts of care and service delivery approaches, including current controversies in the field of DBP, particularly in their community.
- n. Understand delivery systems and market forces as they impact on the care of children with developmental and behavioural problems.
- o. Be able to evaluate and serve as market radar for the quality of services for children with developmental or behavioural needs in the community, and to support knowledge capture and dissemination.
- p. Teach DBP in professional training programmes, academic settings and the community.
- q. Understand ethical principles with respect to research and clinical practice.

- r. Become future leaders in the field of DBP in Hong Kong.

## **CURRICULUM (Knowledge, Skills, Attitude)**

### **Knowledge: Overview**

#### Foundations of DBP

- Developmental course and theories
- Biological mechanisms in development and behaviour
- Family and societal factors

#### Assessment and Management

- Assessment
- Management
- Anticipatory guidance / health promotion
- Counselling and interventions
- Basic pharmacotherapy

#### Team processes

- Collaboration
- Knowledge of other health professionals' roles and methods
- Parent empowerment

#### Policies and Ethics

- Legal rights and processes
  - Policy papers, including Hong Kong Rehabilitation Programmes
  - Disability Discrimination Ordinance
  - Eligibility criteria for disability allowance and related allowances
  - Eligibility criteria for special education for preschool and school age children
- Educational administration and processes
  - Educational policy and services for special needs
  - Role of DBP in initiating and participating within a school's evaluation of a child with learning problems

- . Purpose and limitations of an individualized education programme
- . Choice and recommendation for special schools and integration into mainstream schools

#### Health care structures and processes

- The impact of various healthcare provisions and arrangements on the access to and quality of services for children with special healthcare needs

#### Advocacy

- How to advocate for children and families with disabilities

#### Ethics

- Legal and ethical implications of screening, assessment, treatment and clinical research

#### Major patient groups:

- A. Global developmental delay and mental retardation
- B. Physical disabilities arising from cerebral palsy, neuromuscular disorders, other congenital or acquired conditions, and developmental coordination disorder
- C. Hearing impairment
- D. Visual impairment
- E. Developmental language delay and specific language impairment
- F. Specific learning disabilities
- G. Autistic spectrum disorders (ASD)
- H. Attention deficit/ hyperactivity disorder (ADHD)
- I. Externalizing conditions including oppositional defiant disorder (ODD) and conduct disorder (CD)
- J. Internalizing conditions including depression, anxiety, mood and obsessive disorders
- K. Regulatory disorders including sleep problems, feeding and eating problems, elimination disorders
- L. Congenital and genetic conditions affecting development
- M. Developmental behavioural disorders as a result of chronic illnesses
- N. Developmental disabilities arising from acquired brain injury
- O. High risk/ early identification and intervention programmes
- P. Developmental problems/disorders resulting from psychosocial factors: child

- abuse and neglect; issues in child protection
- Q. Substance use/abuse: prevention and identification

### **Knowledge & Skills: specific patient groups**

#### **A. Global developmental delay and mental retardation**

##### Knowledge

- Understand current psychological theories of intelligence
- Know the level of severity and diagnostic criteria for intellectual disability
- Understand the common aetiologies and risk factors
- Know the epidemiology
- Understand the prognosis and potential of individuals with different levels of intellectual disability
- Understand the effects of early intervention
- Know the differential diagnoses, co-morbid conditions and complications
- Understand the specific behavioural, educational and social challenges at different developmental stages
- Know the use, limitations and interpretation of available psycho-educational assessment tools
- Know how to plan and organize the medical evaluations
- Know how to plan and organize the treatment of associated behavioural and emotional problems
- Know the educational interventions available
- Know how to plan and organize management across developmental stages

##### Skills

- Be able to identify global developmental delay in children through the range of age from infancy to adolescents
- Be able to recognize syndromes associated with the delay, determine the medical investigations (including genetic and metabolic diagnostic tests and investigations) required for identifying underlying neurological or other diseases; and make appropriate referral for in-depth work up
- Be able to administer and interpret assessment tools for evaluating overall development in the young child, as well as screening for cognitive, emotional behavioural and perceptual motor functioning in older children and

adolescents

- Be able to specifically recommend further assessments by relevant professionals, and to interpret, collate and explain their findings in detail to parents
- Be able to communicate interventions and educational systems that are appropriate to the child and family, including working with the family on disclosure related issues
- Be able to lead the family at different stages to address the child's/ adolescent's needs, including expectations of health issues, planning for transitions in school, vocational training, employment and potential long term care
- Be able to run programmes that provide families with information on the condition and available resources
- Be able to foster centre-based or regional self help groups for parents with children with similar intellectual disabilities, providing support in organization and professional advice for activities and advocacy

**B. Physical disabilities arising from cerebral palsy, neuromuscular disorders, other congenital or acquired conditions and developmental coordination Disorder**

Knowledge

- Understand the pathogenesis of cerebral palsy, neuromuscular disorders, other CNS conditions and developmental coordination disorder
- Know the signs and symptoms of cerebral palsy and neuromuscular disorders
- Know the diagnostic criteria and presentation of developmental coordination disorder
- Know the prevalence and epidemiology
- Know the classification, specific causes and different types of cerebral palsy
- Understand the genetics of neuromuscular disorders
- Know the natural course of the disease and range of prognoses
- Know the commonly associated conditions and complications
- Know the developmental and behavioural characteristics
- Know the systems of education available
- Know how to plan and organize evaluations
- Know how to plan and organize management across developmental stages

Skills



- Be able to take comprehensive history
- Be able to perform general and in-depth neurological examination for children of different ages
- Be able to assess and document functional mobility (GMFCS, FMS etc), participation level and learning potential
- Be able to plan and interpret suitable investigations for etiology and complications
- Be able to conduct comprehensive developmental assessment, including providing proper positioning and environment, and the use and interpretation of assistive devices and developmental assessment tools specific for children with physical disabilities
- Be able to interpret multiple sources of information and contribute to the prescription of appropriate orthoses, medical and surgical interventions
- Be able to provide specific advice on the developmental course and options for intervention
- Be able to provide advice on training and educational needs
- Be able to liaise and cooperate with the medical team, education team and related partners in management and in policy setting

### C. **Hearing impairment**

#### Knowledge

- Understand the development of language and hearing
- Know the definition and types of hearing impairment
- Know the causes of childhood hearing impairment
- Understand the developmental, behavioural and academic problems associated with hearing impairment
- Know how to assess developmental progress in children with hearing impairment
- Know how to plan the management of hearing impairment and its developmental and behavioural complications
- Recognize the typical audiogram of children with different types of hearing impairment
- Understand the common educational/communication methods for children with hearing impairment: oral, manual and total language
- Understand the criteria and efficacy for amplification with hearing aids and cochlear implantation

### Skills

- Be able to recommend and interpret the range of audiological tests used for screening and diagnosing hearing impairment, as well in assessments of functional hearing for speech, language and use in daily lives
- Be able to work with ENT specialists in diagnostic workup, and participate in making recommendations and providing counseling to parents for treatment modality options (cochlear implants, hearing aids etc)
- Be able to explain in detail the various educational options to the parents for preschool as well as school aged hearing impaired children, listing the variety of teaching approaches, pros and cons of language systems (sign, aural-oral, sign bilingualism etc)
- Be able to identify expected and potential developmental problems associated with hearing impairment and when and with what tools these should be screened for and evaluated. These include specific difficulties in speech and language acquisition in children with hearing impairment, literacy development, psycho-social complications, associated balance and vestibular problems, etc.
- Be able to organize multi-disciplinary and cross sectoral assessment and treatment activities to address the needs of individual children as well as groups of children with hearing impairment and their families.

## D. **Visual impairment**

### Knowledge

- Understand the developmental maturation of vision
- Understand the developmental, behavioural and academic problems associated with visual impairment
- Know the definition and types of visual impairment
- Know the causes of childhood visual impairment
- Know how to assess developmental progress in children with visual impairment
- Know how to plan the management of visual impairment and its developmental and behavioural complications
- Understand the various modalities of teaching and learning, including Braille, for children with visual impairment
- Understand the efficacy and range of visual aids to help make best use of residual vision

### Skills

- Be able to screen children of different ages and developmental levels for visual impairment, including those with multiple handicaps
- Be able to conduct comprehensive developmental assessment, including the use and interpretation of assessment tools specific for evaluating the visual function and development of children with visual impairment
- Be able to identify the different etiologies of visual impairment and make the necessary investigations and appropriate referral for medical intervention
- Be able to provide specific advice to parents of children with visual impairment on the developmental course, developmental facilitation strategies at different developmental stage, and management of behavioural complications
- Be able to provide advice on the training and educational needs of children with visual impairment, including various modalities of teaching such as Braille
- Be able to provide advice on the efficacy and use of visual aids to make best use of residual vision
- Be able to liaise and cooperate with the medical team, education team and related partners in policy setting and management of children with visual impairment

## **E. Developmental language delay & specific language impairment**

### Knowledge

- Understand the normal developmental progression of language and articulation skills
- Understand the phonological, semantic, grammatical and prosodic aspects of language
- Understand current diagnostic criteria
- Know the neural basis and theories on etiology
- Know the epidemiology and range of prognoses
- Know the differential diagnoses and common co-morbid conditions
- Know the signs and symptoms of disabilities in semantic skills, phonological skills, syntax and prosodic skills
- Understand the use, limitations and interpretation of available language assessment tools
- Know how to plan and organize the evaluations

- Know how to plan and organize management across developmental stages

### Skills

- Be able to take comprehensive history
- Be able to differentiate between normal variation and significant problem or disorder
- Be able to integrate and document information from multiple sources including that from speech therapists, audiologists, teachers and other related professionals
- Be able to establish the diagnosis, identify strengths and needs based on history, naturalistic observation and the administration of individualized, standardized, culturally and linguistically appropriate psychometric measures
- Be able to identify associated co-morbidities and differential diagnoses
- Be able to identify risk and protective factors and provide counselling on prognosis and long term needs
- Be able to advise parents on language facilitation at home and in the educational setting
- Be able to set goals for therapy in enhancing language development
- Be able to provide advice to teachers on educational and behavioural management in classroom settings
- Be able to advise parents on the use of alternative and augmentative communication devices
- Be able to provide parents with information on their rights based on current policy and available service

## F. **Specific learning disabilities**

### Knowledge

- Understand the current concepts regarding the genetics of and neuroscientific underpinnings of specific reading disabilities (dyslexia)
- Understand the psychological, linguistics and higher mental processes in reading and its disorders
- Understand the cognitive and adaptive skills necessary for typical development of reading and writing abilities
- Understand the current theories underlying evaluation and diagnostic criteria
- Know the epidemiology and range of life long outcomes
- Know the signs and symptoms of reading and learning difficulties

- Know the differential diagnosis of low academic achievement
- Know the common co-morbid conditions
- Know how to plan and organize the evaluations
- Understand the local structure of educational interventions and related policies
- Know the appropriate educational interventions and accommodations

### Skills

- Be able to identify risk factors for specific reading disabilities
- Be able to recognize signs and symptoms, and perform evaluation for confirming reading impairment and need for further diagnostic evaluation by psychology, education and other professionals
- Be able to perform assessment to rule out or confirm presence of common co-morbid developmental conditions
- Be able to provide basic guidance to parents for strengthening reading development in reading at risk or reading disabled young children
- Be able to connect with special education services for relevant support, and be able to make recommendations to schools on necessary remediation and accommodations, including for open examinations
- Be able to work with self help parent groups and public bodies to advance the services for these children and young people, including advocacy for equal access to further education
- Be able to do research to promote understanding of underlying biology, including genetics and brain studies, as well as for developing tools for assessment, remediation and accommodations, and on epidemiology of specific reading disorders in the local language

## G. **Autistic spectrum disorders (ASD)**

### Knowledge

- Know the epidemiology
- Know the normal development of social skills, language and behavior of children
- Know the aetiology and commonly associated neurobiological conditions
- Know the diagnostic criteria and differential diagnoses
- Know the range of prognoses
- Know how to plan the medical and psycho-education evaluation

- Know how to develop a holistic management plan
- Understand the role of early intervention and behavioural therapies
- Know the appropriate educational interventions and accommodations
- Understand the role of psychopharmacologic agents in the management
- Know the risks and potential use of common alternative treatments

### Skills

- Be able to conduct diagnostic interview specific for ASD, including taking comprehensive developmental history and the use of specific history taking instruments (e.g. ADI-R, 3di, DISCO) to improve the diagnostic reliability
- Be able to conduct comprehensive evaluation including clinical observation of the child's social and communication skills and behaviour, the use of ASD specific assessment tools (e.g. ADOS)
- Be able to conduct comprehensive evaluation of speech and communication skills, cognitive profile, adaptive functioning and sensory problems in ASD
- Be able to differentiate ASD from other differential diagnoses of language delay/ disorder, and co-morbidities
- Be able to identify possible neurobiological causes and co-morbidities (e.g. Fragile X, Tuberous Sclerosis, Rett Syndrome, epilepsy) and refer to other specialists for further investigation and management
- Be able to integrate all the findings and take a holistic approach in patient management
- Be able to provide feedback to family and child, including interpretation of findings in light of current neurobiological aetiology and neuro-psychological models
- Be able to recommend appropriate early intervention strategies and behavioural management at home, and preventive strategies including screening of siblings
- Be able to recommend appropriate intervention, training and education that are specific for the child and family at different developmental stages
- Be able to provide advice to teachers on educational and behavioural management in classroom settings
- Be able to provide counselling to parents on current issues and research, and on conventional and alternative therapies
- Be able to provide anticipatory guidance at important transition stages
- Be able to monitor developmental progress and rehabilitation implementation

## H. **Attention deficit/ hyperactivity disorder (ADHD)**

## Knowledge

- Know the epidemiology
- Understand the normal development of children's behaviour and attention at different ages
- Know current concepts and research regarding the aetiologies, familial pattern, and the prenatal and environmental exposures that can cause or exacerbate the symptoms
- Know the characteristics and limitation of current diagnostic criteria
- Know the differential diagnoses and common co-morbidities (e.g. developmental, behavioural and learning disorders)
- Know the range of prognoses and natural history of the condition
- Know the available psycho-educational assessment tools, and understand their use and limitations
- Know how to develop a holistic management plan
- Understand the role and use of psychopharmacologic agents in the management. Know the limitations and benefits, and potential side effects of medications
- Know the behavioural management of ADHD in home and classroom settings
- Know the appropriate educational interventions and accommodations
- Know current issues and research on the alternative therapies

## Skills

- Be able to conduct ADHD specific diagnostic interview, including comprehensive developmental and psychosocial history taking, and the use of appropriate questionnaires and their interpretation
- Be able to conduct comprehensive diagnostic and functional evaluation, including: clinical observation of child's attention and behaviour in structured and unstructured environment, evaluation of the impact on child's daily function, and use of appropriate psycho-educational assessment tools
- Be able to differentiate ADHD from problems with or normal variations in activity, impulsivity, and attention at different ages
- Be able to identify possible neurobiological causes and differential diagnoses (e.g. epilepsy, thyroid dysfunction, visual impairment, sleep problems), and refer to other specialists for further investigation and management
- Be able to identify common co-morbid conditions (e.g. learning and developmental disorders, mood disorders, other externalizing behavioural

disorders, developmental coordination disorders) and formulate separate management plans for these conditions

- Be able to interpret the results from available psycho-educational assessment tools
- Be able to integrate all findings and take a holistic approach in patient management
- Be able to advise parents on the potential benefits and side effects of medications used in treatment, and on behavioural management at home
- Be able to provide advice to teachers on educational and behavioural management in classroom settings
- Be able to counsel parents on current issues and research, and on conventional and alternative therapies
- Be able to provide anticipatory guidance at important transition stages
- Be able to monitor developmental progress and rehabilitation implementation

#### **I. Externalizing conditions including oppositional defiant disorder (ODD) and conduct disorder (CD)**

##### Knowledge

- Know the epidemiology
- Understand the normal development of children's behaviour at different developmental stages
- Know the behavioural and functional characteristics and variations in presentation based on developmental stage
- Know the characteristics and limitation of current diagnostic criteria
- Know current concepts and research regarding the aetiologies, and the family system factors that contribute to the development, exacerbation and maintenance of the condition
- Know the differential diagnoses and common co-morbidities (e.g. ADHD, mood disorders, developmental and learning disorders)
- Know the range of prognoses and natural history of the condition
- Know the available psycho-educational assessment tools, and understand their use and limitations
- Know how to develop and organize a holistic management plan
- Know the behavioural management in home and school setting

##### Skills



- Be able to conduct diagnostic interview, including the taking of comprehensive developmental and psychosocial history, and the use of appropriate questionnaires and their interpretation
- Be able to recognize psychosocial factors that contribute to the development, exacerbation and maintenance of the condition
- Be able to conduct comprehensive diagnostic and functional evaluation, including: clinical observation, evaluation of child's behaviour and mental state, evaluation of their impact on child's daily function, and use of appropriate assessment tools for psycho-educational evaluation
- Be able to differentiate behaviour disorders from normal variation
- Be able to interpret the results from available psycho-educational assessment tools
- Be able to integrate all the findings and take a holistic approach in patient management
- Be able to identify common co-morbid conditions (e.g. learning and developmental disorders, mood disorders, ADHD) and formulate separate management plans for these conditions
- Be able to advise parents on behavioural management at home, and to make appropriate referral to child psychiatrist for further management of severe cases
- Be able to provide advice to teachers on educational and behavioural management in school settings

**J. Internalizing conditions including depression, anxiety, mood and obsessive disorders**

Knowledge

- Know the epidemiology
- Understand the normal development of children's behaviour and mood at different developmental stages, and the relationship between temperamental characteristics and mood/anxiety disorders
- Know the behavioural and functional characteristics and variations in presentation at different developmental stages
- Know the characteristics and limitations of current diagnostic criteria
- Know current concepts and research regarding the aetiologies
- Know the family, social and environmental factors that contribute to the development, exacerbation and maintenance of the condition
- Know the differential diagnoses and common co-morbidities (e.g. ADHD,

developmental and learning disorders)

- Know the range of prognoses and natural history of the condition
- Know the available psycho-educational assessment tools and questionnaires, and understand their use and limitations
- Know how to develop and organize a holistic management plan
- Know the initial management of these disorders, including psychological and pharmacological

#### *Suicidal behavior*

- Know the risk factors associated with suicidal behaviour
- Know the poor prognostic factors
- Know the steps in the prevention and management of children and adolescents at risk
- Know the indications for hospitalisation and further referral

#### *Skills*

- Be able to conduct diagnostic interview, including taking comprehensive developmental and psychosocial history, and using appropriate questionnaires and interpreting their results
- Be able to recognize psychosocial factors that contribute to the development, exacerbation and maintenance of the condition
- Be able to conduct comprehensive diagnostic and functional evaluation, including: clinical observation and evaluation of child's behaviour, mood and mental state, evaluation of their impact on child's daily function, and use of appropriate assessment tools for psycho-educational evaluation
- Be able to differentiate disorders, from problems and normal variations in mood and anxiety symptoms at different ages
- Be able to identify possible neurobiological causes underlying sudden changes in personality and mood, and the development of significant somatic complaints and psychotic symptoms (e.g. brain tumour and infection, epilepsy, metabolic and drug effect); and refer to other specialists for further investigation and management
- Be able to interpret the results of psycho-educational assessment tools and questionnaires
- Be able to integrate all the findings and take a holistic approach in patient management
- Be able to identify common co-morbid conditions (e.g. learning and

developmental disorders, other externalising behavioural disorders and psychiatric disorders) and formulate separate management plans for these conditions

- Be able to advise parents on initial management, including psychological and pharmacological, and to make appropriate referral to child psychiatrist for further management
- Be able to provide advice to teachers on educational and behavioural management in school settings

**K. Regulatory disorders including sleep problems, feeding and eating problems, elimination disorders**

*Sleep problems*

Knowledge

- Know the cultural variations, developmental progression and contributing factors
- Know the association with other psychiatric, developmental and behavioural disorders
- Know the different stages of sleep, physiology of sleep cycles, and changes with development
- Know the primary parasomnias and the physiology of sleepwalking and night terrors
- Know the behavioural effects of sleep deprivation
- Know the effects of commonly used medications on sleep

Skills

- Be able to recognize the signs and symptoms
- Be able to plan initial evaluation and management

*Feeding and eating problems*

Knowledge

- Know the developmental progression of food selectivity in children and development of feeding skills
- Know the epidemiology and etiology
- Know the diagnostic criteria

- Know the differential diagnoses
- Know the signs and symptoms and pre-morbid behaviour
- Know the associated medical, developmental and behavioural conditions
- Know how to evaluate for an underlying endocrinopathy or genetic syndrome
- Know the criteria for hospitalization and referral to a treatment specialist

#### Skills

- Be able to evaluate picky/selective eater, child with rumination, feeding skill disorder
- Be able to recognize the signs and symptoms of eating disorder
- Be able to plan evaluation and management of behavioural and developmental conditions

#### *Elimination disorders*

#### Knowledge

- Know the typical developmental course
- Know the pathophysiology, genetic, medical and psychosocial factors
- Know the epidemiology
- Know the diagnostic criteria
- Know the differential diagnoses
- Know the psychological and behavioural complications
- Know how to plan and organize evaluations and management

#### Skills

- Be able to plan evaluation and management
- Be able to provide counseling and advice on management

### **L. Congenital and genetic conditions affecting development**

#### Knowledge

- Know the phenotypic expression, typical developmental profile and common behavioural problems with common genetic disorders e.g.:
  - Down syndrome
  - Fragile X syndrome

- Sex chromosome abnormalities
- Trisomy 13 and 18
- William's syndrome
- Prader-Willi and Angelman syndromes
- Velocardiofacial syndrome
- Neurocutaneous syndromes (e.g. neurofibromatosis, tuberous sclerosis)
- Know the associated medical and neurological complications
- Know the appropriate laboratory evaluation to establish the diagnosis
- Know the developmental and behavioural characteristics

#### Skills

- Be able to recognize the phenotypic features
- Be able to provide developmental evaluations and recommendations

### M. **Developmental behavioural disorders as a result of chronic illnesses**

#### Knowledge

- Know the clinical patterns and symptoms
- Know the interaction between psychological and physiologic factors that produce pain
- Know the etiologies
- Know the natural history and prognoses
- Know the signs and symptoms
- Know the differential diagnoses
- Know the appropriate evaluations
- Know how to plan and organize initial treatment strategies
- Understand common psychologic and psychophysiologic treatments

#### Skills

- Be able to identify and evaluate children with somatic complaints
- Be able to provide initial management and plan for further referral as indicated

### N. **Developmental disabilities arising from acquired brain injury (such as stroke, infection, traumatic brain injury)**

#### Knowledge

- Understand the pathogenesis of brain injury with different types of brain injury
- Understand the natural history of recovery
- Know the clinical features
- Know the associated medical and neurological complications
- Know the developmental, cognitive and behavioural consequences
- Know the long-term management
- Understand the use, limitations and interpretation of assessment tools used by psychologists and occupational therapists for evaluation of neuropsychological function and life adaptation skills
- Know how to plan the evaluations
- Know how to plan appropriate management to maximize the child's optimal developmental and behavioural outcomes
- Know the appropriate educational interventions and accommodations

#### Skills

- Be able to take comprehensive history
- Be able to perform general and in-depth neurological examination for children of different ages
- Be able to integrate information from multiple sources including neurologists, neurosurgeons, radiologists, clinical psychologists, occupational therapists, teachers and other related professionals
- Be able to interpret the results from available neuropsychological and life adaptation skill assessment tools used by psychologists and occupational therapists and establish current functioning of the child
- Be able to write up medical legal reports based on premorbid condition, pathology, and assessment results
- Be able to provide specific advice on the course of illness, interventions, and training and educational needs
- Be able to liaise and cooperate with the medical team, education team and related partners in management

#### O. **High risk/ early identification and intervention programmes**

##### Knowledge

- Know prenatal and perinatal conditions, including infections and known teratogens and their clinical features

- Know the major and minor morbidity outcomes of prematurity
- Know how to plan a surveillance strategy for detecting hearing loss

#### Skills

- Be able to develop and organize a plan for monitoring children at risk for developmental problems
- Be able to develop and organize an appropriate management plan to maximize the child's optimal developmental and behavioural outcomes

### **P. Developmental problems/disorders resulting from psychosocial factors: child abuse and neglect; issues in child protection**

#### Knowledge

- Know the parental risk factors (e.g. stress, isolation, parental abuse, substance abuse, poverty)
- Know the child risk factors (e.g. prematurity, disability, irritability)
- Know common developmental and behavioural sequelae and long term outcome
- Know the legal and clinical implications
- Know the appropriate management for a child suspected of being abused
- Know the components of effective programmes for prevention of child abuse

#### Skills

- Be able to recognize signs and symptoms, including psychological symptoms
- Be able to plan and organize initial evaluation and management

### **Q. Substance use/abuse: prevention and identification**

#### Knowledge

- Know the risk factors
- Know the epidemiology and natural history
- Know the common signs and symptoms of substance abuse
- Know the health and behaviour effects
- Know the major strategies for prevention of substance abuse
- Know how to plan an education programme/ prevention
- Know how to plan a cessation programme/ intervention

- Know the criteria for referral and appropriate treatment
- Know the use and limitations of urine and serum drug screening tests

### Skills

- Be able to recognize the signs and symptoms of substance abuse including alcohol/ drug dependence
- Be able to coordinate with child protection teams for timely actions
- Be able to counsel parents regarding prevention and early intervention

### Attitude

- Commitment to carry out professional responsibilities and continuous professional development
- Adherence to ethical principles
- Sensitive to diversity and cultural sensibilities
- Empathetic
- Willingness to contribute to team work, and interact and liaise with different professionals in the medical, paramedical, educational, social and other related fields
- Leadership in coordinating and planning services in the field of DBP
- Commitment as child advocate



## METHOD

### A. Clinical

- (i) Structured didactic sessions and course work to consolidate the foundation and research-based theories on child development, its deviations and management

These include reading assignments, lectures and videotape demonstration of patient encounters and procedures, seminars for integrating theory with clinical experience, tutorial teaching by a variety of disciplines (DB paediatrician, child neurologists, neurorehabilitation team members including neurosurgeons and orthopaedic surgeons and therapists, neuropsychologists, speech and language pathologists, social work agency representatives, special educators and others), assigned course work, etc. Resources such as libraries and access to knowledge databases should be readily available to trainees.

- (ii) Rotations through full range of programmes delineated by age group and diagnostic categories

The entire age range from neonatal to late adolescence, and range of developmental disorders including congenital, acquired, in-patient and ambulatory, at clinic or community settings, are to be covered over the training period. Elective in-depth studies in specific programmes are available as options.

- (iii) During programme rotation:

- a. to participate in its operations
- b. to conduct hands on assessment and case management, on assigned number of cases, as multidisciplinary team member and case manager, and participate in routine team meetings on the full range of client groups
- c. hands on assessment and case management, on assigned number of cases, as multidisciplinary team member and case manager, and participate in routine team meetings on the full range of client groups
- d. to maintain close consultation with consultants from relevant medical and non-medical specialties, such as neurology, neurosurgery, psychiatry,

genetics and special education, and participate in joint evaluation and management at bedside/ clinic and structured multi-specialty team meetings (e.g. developmental-behavioural paediatrician, neurosurgeon, neurologist, and therapists of children pending epilepsy surgery; developmental-behavioural paediatrician, ENT, dental and plastic surgeons, speech therapist and audiologist for children with cleft anomalies).

- e. to gain knowledge and clinical skills to identify children for whom etiological / medical investigations are indicated, and to make referrals for laboratory investigations and attention by paediatric neurologists and other relevant specialties.
- f. to gain skills in behavioural and medication management through theoretical understanding and supervised practice.
- g. to conduct case-based learning through reviewing clinical and longitudinal management along with theoretical components of developmental and environmental processes, including their broader application to groups of problems or patients.
- h. to be familiarized with the range of resources for children and families in the community.
- i. to serve as consultants to rehabilitation agencies such as preschool centres and special schools for children with various disabilities.
- j. to sit in as observer, where possible, on policy meetings on matters related to DBP and rehabilitation in Hong Kong.

## B. **Research**

- (i) Attend meetings of epidemiology and research teams of the training centre(s) that oversee vetting of research proposals, administrative procedures, and receiving of interim and final reports. Attend and contribute to didactic sessions on research theories and practice of these teams.
- (ii) Through study of service clinical database, analyze clinical, demographic and

service delivery trends, making reference to local and international statistics, and developing research questions.

- (iii) Be prepared to study the specific needs of the population in Hong Kong and approaches to treating or helping them.
- (iv) Under close guidance of a research mentor, participate as principle investigator in at least one research project during the training period, including writing up of proposal, coordination with other parties involved, participate in applying for financial support as indicated, implementing the study, and writing up the report and submitting for publication. The trainee will work with a mentor for each project, as well as share research process experiences with other trainees undergoing studies/projects, as available in the training setting.
- (v) Participate as assistant or observer in large research projects led by trainers +/- outside academic organizations.
- (vi) (Optional) Protected time for enrollment in selected courses on research, biostatistics and epidemiology at local academic institutions on public health.

### C. **Teaching and learning**

- (i) Be given guidance in searching relevant literature, preparing clinical materials including video- and audio-taping, giving clinic based demonstrations, using presentation software and equipment, and speaking publicly.
- (ii) Observe and later provide teaching, in various formats such as use of powerpoint and video clip illustrations. The teaching should be at multiple levels, including to parents and children to help them understand the conditions that affect them and options for remediation, to medical students, general paediatric trainees, physicians and paediatricians who provide ongoing care in maternal and child health clinics, to community paediatricians and family physicians, to related medical and non-medical professionals and academic disciplines, and to the public.
- (iii) Participate as speaker (and organizer where possible) at least two times during the training period at open DBP academic/professional scientific meetings. Presentation of clinical reviews or findings of research done during the training

period will be encouraged.

D. **Administration**

- (i) Acquire administrative skills on DBP operations and subspecialty development
- (ii) Understand and utilize computerized information systems that are designed for DBP service management and data analysis
- (iii) Understand and apply new and changing technologies to improve DBP services and training activities
- (iv) Participate in quality assurance process
- (v) Understand service delivery approaches in DBP, including those that are centre-based and community- based
- (vi) Understand how funding mechanisms and local market forces impact the practice of DBP
- (vii) Understand local public policies and administration as related to DBP, for service development and advocacy.

## PROGRAMME STRUCTURE

### Duration

The DBP training programme is a 3 years programme, with a maximum of one cumulated year of training received during Higher Training in general paediatrics, and subject to approval of the DBP Subspecialty Board. The full period of training is three years, which when accounting for annual leaves allows for around 33 months of programming. Required training periods for child public health (2 months), clinical genetics (one month), child neurology (3 months) and child psychiatry (6 months) may occur as continuous modules, or spread out over longer periods but amounting to the equivalent of time periods specified. Recommendations for annual leaves include one month of annual leave to be taken within the 18 months DBP foundation module at the trainee's home base setting, one week within child neurology, two weeks within child psychiatry, and one month during the elective period. These may however be modified by individual trainees and programmes upon due discussion with programme trainers and, if necessary, the Subspecialty Board.

### Rotations

DBP Subspecialty Training Programme 36 months			
DBP Core Programme (DBP foundation module 18 months, Child Public Health in DBP module 2 months, Clinical Genetics in DBP module 1 month)	Child Neurology	Child Psychiatry	Electives
21 months	3 months	6 months	6 months

#### A. DBP Core Programme (total 21 months)

##### (a) DBP foundation module

18 months full time “Foundation” DBP module at accredited training centres in Hong Kong to focus on the breadth of the discipline of DBP, including children and adolescents with high-prevalence conditions that are the foundation of the DBP discipline, and those with multiply handicapped/medically complex conditions, at both ambulatory and in-patient settings. The programme includes comprehensive and interdisciplinary clinical assessment and management, investigation / referrals for

underlying medical, neurometabolic and genetic conditions, and participation as consultants and partners in medical, special education and the community, including related medical specialties, schools, training centres and parent group settings. Regular joint activities with outside related specialties, settings, and service providers for management of patients must be documented.

During this initial 18 month period of training at all sites, initially the trainee will observe assessments performed by senior trainers; then s/he will perform the assessments under the direction of the trainer, and finally s/he will perform assessments and provide care independently but will be required to discuss all cases with the trainer. The trainee will be expected to join the various subspecialty clinics that involve different multidisciplinary teams. It is recommended that each trainee follow a panel of patients/families, to track progress of these children over the three years of the training.

#### *DBP in ambulatory setting*

The majority of DBP training programmes are delivered in ambulatory settings. The centre (or centres which together contributing to one training programme) should be equipped with all essential components for diagnostic, therapeutic and follow on services to children with developmental disabilities; for bridging medical, educational, rehabilitation and community services to them; providing professional training; and carrying out research in the field of DBP.

Required components include:

- (i) Adequate client load covering the range of developmental disabilities and behavioural disorders, for supporting trainee exposure and research. During the 18-month foundation DBP module rotations through different centres, each DBP trainee should be exposed to assessment and management of around 600 children and adolescents spanning 0-18 years and the range of conditions, and their families. Training exposure should be provided for children and adolescents with high prevalence developmental problems as well as those with multiple disabilities and medically complex problems. Close partnership and established collaborations with in-patient units, child protection services, adolescent medical services and other related training partners should be in place.

- (ii) Presence of stable multidisciplinary team of health care professionals specifically trained and with working experience in DBP.
- (iii) Ongoing programmes with non-medical disciplines from other service sectors, such as those from special education.
- (iv) Facilities for respective disciplines and activities, including tools and equipment, and rooms designed for special purposes.
- (v) Structured didactic and teaching sessions in place, involving a comprehensive set of presentations covering theories, research, clinical practice, social and policy applications of DBP. Research lectures and meetings along with research mentorship system for individual trainees have to be available.
- (vi) Specialized programmes: The centre(s) should have as its clinical backbone a range of individual programmes that are developed for specific patient groups, overseen by stable, specifically trained multidisciplinary teams on respective subjects.

Major specific patient groups include:

- a. Global developmental delay and mental retardation
- b. Physical disabilities arising from cerebral palsy, neuromuscular disorders, other congenital or acquired conditions and developmental coordination disorder
- c. Hearing impairment
- d. Visual impairment
- e. Developmental language delay and specific language impairment
- f. Specific learning disabilities
- g. Autistic spectrum disorders
- h. Attention deficit/ hyperactivity disorder
- i. Externalizing conditions including conduct disorder and oppositional defiant disorder
- j. Internalizing conditions including depression, anxiety, mood and obsessive disorders
- k. Congenital and genetic conditions affecting development
- l. Regulatory disorders including sleep problems, feeding and eating problems, elimination disorders
- m. Developmental behavioural disorders as a result of chronic illnesses

- n. Developmental disabilities arising from acquired brain injury
- o. High risk/ early identification and intervention programmes
- p. Developmental problems/disorders resulting from psychosocial factors: child abuse and neglect; issues in child protection
- q. Substance use/abuse: prevention and identification

Each of these special programmes/ teams should have in place:

1. Clinical protocols for diagnosis, and criteria for referrals and follow up management
2. Structured parent support and educational activities after diagnosis
3. Ongoing internal clinical data review and studies on the subject
4. Established networks within the community for supporting their client group, including consultative roles at related service agencies
5. Ongoing research activities
6. Participation in advocacy work and related local policies

DBP trainees should be exposed to each of the above conditions and their programmes during their core DBP rotation.

For all trainees, reading, experience and supervision should include in depth focus on at least one condition in each of the following 3 categories. These focused areas of attention are in addition to reading and patient care in general DBP topics.

- Category A: Includes patients with physical and sensory impairments
- Category B: Includes patients with learning and communication difficulties (including autism)
- Category C: Includes patients with behavioural and emotional difficulties

#### *In-patient DBP exposure*

Whilst the majority of clients for DBP attention are seen in ambulatory settings, a minority of patients cared for by DB paediatricians are hospitalized either acutely or chronically (mostly secondary to their ongoing developmental disorders). Exposure for trainees to in-patient assessment, medical investigations and rehabilitation of children and adolescents with severe disabilities and medically complex problems is required. Consultation on assessment and management, including coordination of input from different medical and other specialties for inpatient and pre-discharge needs will be expected.



Access to these in-patients consultations could arise during their DBP, child neurology or child & adolescent psychiatry or elective rotations.

*\*Guideline for complexity of cases*

Case profile for DBP foundation module	Guideline	
	Highly Complex	10%
	Complex	40%
	Intermediate	30%
	Simple	20%

Highly complex

Cases who have multiple domains of disability with severe functional impairment, requiring advanced knowledge and considerable experience for optimal management, sophisticated diagnostic assessments over a period, complicated treatment regimen involving multidisciplinary team and community partners to facilitate rehabilitation such as multilateral case conference, school visits and educational planning conferences, e.g. cases with significant physical, sensory and cognitive impairment, cases with severe traumatic brain injury, cases with multiple and severe learning, language and behavioural comorbidities e.g. SLD, ADHD, DCD, ODD, ASD/ ID with severe challenging behaviours, and serious psychosocial and family issues.

Complex

Cases who have multiple domains of disability with mild to moderate functional impairment, requiring multiple diagnostic assessments, evolving clinical presentations and changing rehabilitation needs. Careful monitoring and treatment regimen involving multidisciplinary teams and community partners are needed to facilitate rehabilitation. Cases include those with moderate physical, sensory and cognitive impairment, and learning, language and behavioural comorbidities.

Intermediate

Cases who have single or multiple domains of disabilities, with one area of severe functional impairment, requiring careful monitoring and treatment regimen involving one or more team members and community partners to facilitate rehabilitation, e.g. cases with severe ADHD with SLD, ASD with

intellectual disability.

### Simple

Cases who have single or multiple domains of disabilities with mild functional impairment, requiring simple treatment regimen by team members and/or community partners to facilitate rehabilitation, e.g. cases with mild language delay, developmental delay and mild ASD / ADHD.

### \*Guideline for number of cases

During the DBP Foundation module, exposure to around 400-500 new / review cases per year is expected.

### (b) **Child Public Health module in DBP**

Two months full time or log-based equivalent<sup>1</sup> attendance at centres which provide exposure to trainees on public health issues related to child development, including Family Health Service of the Department of Health and the HKU Academic Community Child Health Unit.

### *Aims and Objectives*

The programme aims to provide trainees with an exposure to public health approaches and methodologies as well as common child public health issues, especially those related to child development and behaviour.

After the attachment, the trainee should have:

- (i) Had an overview of child public health
- (ii) Understood the determinants of young children's health, development and well-being and the effects of these over their life course
- (iii) Acquired the knowledge and skills:
  - To search, critically review and interpret published literature related to common child public health issues
  - To use epidemiological and/or other approaches to describe the health status or health care needs of the child population and, where appropriate,

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<sup>1</sup> log-based equivalent: number of hours/sessions that is equivalent to full time training

- to identify personal or environmental factors which either threaten or enhance their health
- To use relevant scientific information in the bio-medical and behavioural literature to plan child health services or other activities
  - To plan and conduct evaluation of health services or other activities

### *Format and Content*

The training programme will take the form of clinical attachment and supervised projects. The trainee will participate in at least one public health project under the supervision of a trainer.

Clinical attachment to child health services, such as:

- i. Comprehensive Child Development Service Clinics and coordination meetings
- ii. Child Protection services under the Hong Kong Social Welfare Department or non-government organizations

Projects: The trainee may propose a new project or participate in existing projects, which may cover one or more of the following aspects:

- i. Health needs assessment
- ii. Devising public health solution through research, development, planning & implementation of public health programmes
- iii. Evaluation and quality management of health services
- iv. Training of health professionals in child / woman health
- v. Development of informational and educational resources
- vi. Participation in health promotion programmes, e.g. promotion of child mental health

### *Potential projects*

- a. Evaluation of the Developmental Surveillance Scheme in Maternal & Child Health Centres (MCHCs)
- b. Evaluation of the Newborn Hearing Screening Programme in Hong Kong
- c. Review / establish a care pathway for children identified to have Permanent Childhood Hearing Impairment (PCHI) by the Newborn Hearing Screening Programme
- d. Development of a central registry of children with PCHI

- e. Evaluation of the Pre-school Vision Screening Programme
- f. Development of a parenting programme on promoting children's language development
- g. Development of a training programme for pre-school educators to support their classroom management of children with developmental / behavior problems
- h. Development of a parenting programme for at-risk mothers e.g. parents with mental health problems, teenage mothers, mothers with substance abuse
- i. Child health promotion projects e.g. smoking prevention, promotion of child mental health
- j. Safeguarding children projects e.g. injury prevention, child abuse surveillance developmental assessment of child abuse victims
- k. Adolescent health projects
- l. Child development projects e.g. development of underprivileged children, quality of life studies of children with disability

(c) **Clinical Genetics module in DBP**

One month full time or log-based equivalent exposure in clinical genetics.

Clinical genetics training will be provided by the Clinical Genetics Service, Department of Health, as well as the HKU/HKWC Clinical Genetics Consortium.

*Format and Content*

The training programme will take the form of clinical attachment and case conference, journal clubs and clinical genetics rounds.

- (i) Clinical component: Direct participation in paediatric clinical genetics out-patient sessions, in-patient consultations and case conferences, and in antenatal genetic screening, prenatal genetic clinics and preimplantation genetics clinics. Specific knowledge and skills in history taking especially family history taking, dysmorphology examination, investigations, and genetic counselling should be emphasized.
- (ii) Medical laboratory component: Exposure to the technology flow and terminology of cytogenetics and molecular genetics, and their application in investigations of developmental disabilities. Exposure to state-of-the-art next

generation sequencing and bioinformatics analysis will be provided in the clinical and research laboratories.

- (iii) Population component: Understanding of public health genetics, including screening programme design and its implementation, and understanding concepts on population genetics as pertinent to child development and its disorders.
- (iv) Genetic counseling component: Elective specialized courses in the study of genetic counseling can be selected by trainees to improve competence in genetic risk assessment and to conduct basic genetic counseling with evidence-based information and effective communication skills.

### **B. Child Neurology experience (3 months)**

This module comprises three months full time child neurology with in- and out-patient clinical duties in child neurology and related educational activities. It is recommended that the neurology rotation should include observing and participating in the specialized clinical work on neurorehabilitation and neurometabolic diseases. This training may occur at local centres accredited by the College for training in child neurology, or at overseas centres with the approval of the DBP Subspecialty Board.

### **C. Child & Adolescent Psychiatry experience (6 months)**

Six months of full time rotation or log-based equivalent<sup>1</sup> number of sessions.

This module will be provided by the Child and Adolescent Psychiatry (CAP) centres accredited by the College of Psychiatry as training centres, and coordinated by the CAP Working Group under the Coordinating Committee in Psychiatry of the Hospital Authority. See *Annex 1* for curriculum.

### **D. Electives in DBP subspecialty related subjects (6 months)**

Elective experiences are intended to prepare the DBP trainee for specialized focus in a specific area under DBP. Elective programmes in clinical, paraclinical and community levels can be chosen, adding up to a total of 6 months. Additional rotations in DBP, CN, child & adolescent psychiatry, or in other electives, may be opted.

All elective programmes are subject to prior approval by the DBP subspecialty board

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<sup>1</sup> log-based equivalent: number of hours/sessions that is equivalent to full time training

on their contents, duration of rotation, relevance to the DBP training, presence of adequate case exposure and supervision, and stated outcome measures.

Elective options include but not limited to:

- a. Developmental-behavioural paediatrics
- b. Child neurology
- c. Child & adolescent psychiatry
- d. Neonatal Medicine / Genetics
- e. Neonatal / high risk programmes
- f. DBP related electrophysiology studies
- g. Rehabilitation for children with multiple disabilities and special health care needs
- h. Child protection
- i. Special education: curriculum, pedagogy and administration
- j. Physical medicine and rehabilitation
- k. Vision / Hearing sciences
- l. Paediatric neurosurgery
- m. Paediatric orthopaedic surgery
- n. Sleep medicine in child development and its disorders
- o. Clinical research as applied to DBP

## **Overall exposure**

All trainees are expected to rotate to at least 2 centres for the DBP (core +/- as elective), and to have the opportunity to receive supervision from at least 3 trainers. Three months overseas training is highly recommended during the whole subspecialty training experience.

## **Supervision arrangement**

The degree to which the trainer will be directly supervising the trainee's clinical work (precepting especially for complex cases), providing didactic sessions, and personally demonstrating through direct participation in team work, should be described at application for the rotation. It is recommended that at least two supervising faculty members oversee each trainee's research and dissertations.

## **Trainer : trainee ratio**

A trainer can supervise no more than two trainees either in the subspecialty training programme or in the Higher Training Programme in Paediatrics.

## **Assessment**

The assessment of progress and performance of trainee will include 3 parts: Ongoing assessment, Annual assessment and Final exit assessment.

### *(a) Ongoing Assessment*

During the training period, the trainee is required to keep a personal log book that is documented, signed, dated and received in timely fashion. The trainer should help the trainee to set specific objectives at the beginning of each rotation, including the number of specific types of cases, procedures, team activities to be done and logged in the log book. It is recommended that each trainee follows a panel of patients/families to track the progress of these children over the three years of the training. The trainer should conduct ongoing assessment of the trainee during regular meetings and supervision sections.

An interim evaluation should be done at the completion of any rotation or interaction with a specific trainer, at least every 6 months. During the evaluation, the trainer should endorse the trainee's log book and complete an assessment form on the trainee's performance. The trainer should conduct an interview with the trainee to provide feedback on his/her performance, to collect feedback on the training programme and to identify area of improvement. The format of the assessment form is one distributed and recommended by the Hong Kong College of Paediatricians. The completed form should be submitted to the Training Programme Director who should review the trainee's performance. A rating less than satisfactory in any category will require an immediate meeting between the trainee and the Training Programme Director to identify causes for unsatisfactory performance and suggests means for improvement.

The Training Programme Director should conduct a meeting with the trainee at least every 6 months to review his/her performance, to collect feedback on the trainer and training programme, and to identify area of improvement. The trainee should

complete an evaluation form for the trainer and training programme, and submit to the Trainer Programme Director prior to the interview.

(b) Annual Assessment

The performance of trainee should also be reviewed annually by the Subspecialty Board designated “Trainee Monitoring Committee” which comprising the Training Programme Director and two Subspecialty Board members. The committee should assess the performance of the trainee by reviewing his/her training log book, portfolio and a structured interview. During the interview, the trainee should present his/her training experience in the past one year and discuss the merits of his/her portfolio. The trainee’s level of competence and performance should be documented by the committee and recorded in his/her programme file for future review. Feedback should be provided to the trainee and areas of improvement should be identified. An evaluation form for the trainer and training programme should also be completed by the trainee and submitted to the committee prior to the interview. If the trainee feels that the annual review is not to his/her satisfaction, the grievance can be addressed by an established appeal mechanism directed by the College.

(c) Final Exit Assessment

A final assessment will be carried out through structured interview, review of two dissertations and presentations, and a final report from the Programme Director. The structured interview will be conducted by three local examiners, or two local examiners and one overseas examiner. The final exit assessment will cover important areas of DBP including clinical knowledge and skills, education, administration and research. The trainee’s skills in triage, comprehensive evaluation, team leadership, communication with parents and team members, counseling and educational skills, knowledge of services and local systems, and efforts in advocating for an individual child and family or group of clients, will be noted. Participation and effectiveness in teaching and research will be documented.

There are 3 domains in the final exit assessment:

1. Dissertations and Presentations

The trainee has to submit TWO dissertations to an Assessment Panel with at least one accepted for publication in an international or local peer reviewed journal. The trainee must also make at least TWO presentations on DBP



subjects in local, regional or international meetings, with the presentation documented by programme book/ meeting poster and endorsed by the trainer. Printout of the presentations should also be submitted to the Assessment Panel for assessment.

2. Viva examination

The trainee has to attend a structured interview conducted by the Assessment Panel.

3. Training Programme Director report

A final report to be written on the trainee's performance during the whole training period.

In order to pass the Final Exit Assessment, the trainee should score a pass in ALL three domains. Trainees who pass the Final Exit Assessment will be invited to apply for College Subspecialty Fellowship and enter in the Subspecialist Registry. For those who fail, the Assessment Panel will recommend subsequent action for consideration by the College Subspecialty Board. If the trainee feels that the Final Exit Assessment is not to his/her satisfaction, the grievance can be addressed by an established appeal mechanism directed by the College.

## **CME/CPD and Audit**

The Continuing Medical Education (CME)/ Continuing Professional Development (CPD) cycle is 3 years (Starting from January and ending in December).

A minimum of 45 points out of the 90 points in a 3-year cycle of the HKCP CME requirements points should be specific to the subspecialty. The method of calculating CME/CPD is similar to the current CME/CPD system of general paediatrics. The College reserves the right to accept or reject the subspecialty CME/CPD points claimed.

Audit activities - A statistical summary of the number of cases / procedures / activities / projects over the 3 years period should be submitted by the Fellow to the Subspecialty Board for review at the end of each cycle.

**Child & Adolescent Psychiatry Module**  
**Developmental-Behavioural Paediatrics Subspecialty Training Programme**  
(Developed by HA Child & Adolescent Psychiatry Working Group and DBP Group)

**Training Objectives**

To equip paediatric trainees with knowledge and skills on the assessment and management of common paediatric behavioural and emotional problems

At completion of training, Paediatric trainees should be able to:

1. Perform and document a relevant history and examination on patients including:
  - Chief complaint
  - History of present illness
  - Medical history
  - A comprehensive psychiatric review of systems
  - Family history
  - Psychosocial history
  - Pre-natal, perinatal and developmental history
  - Educational history
  - Risk factors
2. Integrate information from history taking and examination to
  - Delineate appropriate differential diagnoses
  - Make a case formulation that includes neurobiological, phenomenological, psychological, developmental, and social aspects
  - Develop an evaluation plan including appropriate medical and psychological examinations and to obtain additional information from pertinent sources e.g. teachers
  - Develop a comprehensive treatment plan addressing biological, psychological, educational, family and social domains
3. Conduct developmentally appropriate interviews with children and adolescents and their families
4. Recognize those common child and adolescent psychiatric disorders and problems and know the basic principles of their treatment

5. Continuously monitor progress of the patient and integrate new information and changes in clinical presentation into an updated differential diagnosis and treatment plan
6. Monitor the development of the child and adolescent and to appropriately integrate this knowledge into the treatment plan
7. Master knowledge of major and common child and adolescent psychiatric disorders and problems including
  - . Epidemiology of the disorder
  - . Aetiology of the disorder including medical, genetic, psychological and social aspects
  - . Phenomenology of the disorder
  - . Co-morbidity of the disorder
  - . The experience, meaning and explanation of the illness for the patient and family
  - . Evidence-based treatment
  - . Clinical course and prognosis
8. Master adequate knowledge on the commonly used pharmacological treatment for child and adolescent psychiatric disorders including
  - . Pharmacological action
  - . Clinical indications
  - . Side effects
  - . Drug interactions
  - . Toxicities
  - . Appropriate prescribing practices
  - . Cost-effectiveness
9. Understand the basic principle of psychological treatments commonly used for child and adolescent psychiatric problems, their indications and limitations
10. Master a good understanding on developmental psychopathology including
  - . Risk factors
  - . Protective factors
  - . Longitudinal course
  - . Parent-child interaction
  - . Family system / development

11. Communicate effectively and sensitively with patients and families the diagnosis, aetiology of the problem, management plan and prognosis
12. To work with family to implement behavioral and emotional management plan at home to maximize generalization.
13. Recognize limitations in own knowledge base and clinical skills, and know when / where to refer

### Programme

#### Day-to-day clinical training

	Outpatient Clinic	Inpatient Ward	Day Hospital
1 <sup>st</sup> month	Observe the assessment of new case (NC) by other team members (psychiatrist, clinical psychologist)	Observe the assessment of new case (NC) by psychiatrist Attend weekly ward round	Observe Day Hospital (DH) training activities / programmes
2 <sup>nd</sup> month	Conduct NC assessment under direct supervision by psychiatrist or clinical psychologist	Conduct NC assessment under direct supervision by psychiatrist Attend weekly ward round	Observe DH training activities / programmes
3 <sup>rd</sup> to 6 <sup>th</sup> month	Assess NC (assigned by the unit-i/c or delegate) on his / her own, and provide follow up management. Cases to be reviewed by trainer as indicated. Weekly one-hour clinical supervision for case presentation and discussion, and tutorial on specific topic. When patients under their direct care are	Take up NC & provide subsequent management in ward Attend weekly ward round When patients under their direct care are secondarily referred to allied health professionals (e.g. clinical psychologist, nurse, occupational therapist, social worker, teacher ) either for further evaluation and / or	Contribute to the planning and implementation of DH training activities / programmes, especially for those patients who are under their direct

	secondarily referred to allied health professionals (e.g. clinical psychologist, nurse, occupational therapist, social worker, teacher ) either for further evaluation and / or management, trainee should try to sit in and observe	management, trainee should try to sit in and observe	
Handover	Transfer all cases to psychiatrist / clinical psychologist subjected to the advice from the training unit-i/c or delegate	Transfer all cases to psychiatrist	Not applicable

During the training period the trainee should familiarize themselves with those commonly encountered child psychiatric problems in the Paediatric setting (e.g. Autism, ADHD) as well as to get some exposure to those important conditions that may be more commonly seen in the child psychiatric settings. Although the trainee is not required to master the knowledge and skill of diagnosing or managing these core psychiatric disorders / conditions, they should be aware of the impact these disorders / conditions may exert on the child and family, to appropriately include them into the list of differential diagnosis, and therefore to make further referral when indicated.

*Suggested clinical exposure:*

1. Autistic Spectrum Disorder Autism, Atypical Autism Asperger's Syndrome
2. Disruptive Behavioral Disorder, Hyperkinetic Disorder, Oppositional Defiant Disorder, Conduct Disorder
3. Adjustment Disorder
4. Anxiety Disorders
5. Depression
6. Obsessive Compulsive Disorder
7. Somatoform / Somatization Disorders

8. Tic Disorders
9. Schizophrenia (include early psychosis)
10. Suicidal youth
11. Aggressive youth
12. Difficult families e.g. parental psychopathology
13. Eating/ Elimination/ Sleep disorders associated with developmental disorders
14. Somatoform disorders
15. Addiction e.g. substance abuse, internet addiction
16. Sexuality problems

*Academic training and widening of clinical exposure*

1. Attend journal club / case discussion meeting / lecture in the respective training units
2. Participate in the monthly Child and Adolescent Psychiatrist specialty training seminar
3. Join case discussion meetings with school
4. Join our regular meetings with Education Bureau (Educational Psychologists and counselors)
5. Join our regular meetings with Child Assessment Centres
6. During the 6-month rotation, the Paediatric trainee should write up one long case report under their direct care. The content should include:
  - . Summary of the case
  - . Differential diagnoses
  - . Formulation
  - . Management
  - . Progress
  - . Literature review on specific aspects of the case e.g. presentation, management or treatment response
7. Observe the delivery of Electro-convulsive therapy in the respective training hospital