Paediatric Neurology 兒童腦神經科

Document 3:

Guidelines on Training and Development of the PN Subspecialty

A. Objectives of the Training Program

(1) To provide broad training and in-depth experience for trainees to acquire the competence of a subspecialist in paediatric neurology to ensure high level of clinical skills and procedural competence that is appropriate for practice of the subspecialty at a secondary, tertiary and quaternary level

(2) To promote critical thinking, self learning and a commitment to continued medical education

(3) To enhance scientific knowledge and lay the groundwork for research in paediatric neurology and related problem.

(4) To develop communication skills based on empathy and sensitivity so as to build long term professional relationships with children and families affected by neurological or neurodevelopmental conditions.

(5) To promote the ability of leading, liaising and coordinating work with other professionals who serve children and families affected by neurological or neurodevelopmental conditions.

(6) To promote advocacy and policy development related to disorders affecting the nervous system of children.

B. Entry to the Paediatric Neurology Subspecialty Training Program

Entry into the subspecialty training should be after the attainment of MRCPCH or an equivalent qualification as recognized by the Hong Kong College of Paediatricians and after the completion of the basic paediatric training at the entry to higher paediatric training. An overlap of Higher and Subspecialty training of no more than one year is allowed for a trainee. A trainee is therefore allowed to register with the Subspecialty Board for Subspecialty Training on entering Higher Training. The trainee shall be allowed to accumulate a period of not more than one year on Paediatric Neurology Training during the three years of Higher Training.

There is no alternative entry to the training program. This program is mandated to be a continuation of basic and higher paediatric training. A trainee entering the program is expected to be trained in general paediatrics and neonatology and is equipped with the basic knowledge in paediatric neurology that is commensurate with the level of training one has undertaken.

C. Curriculum of Training

Attitudes and Core competence

Trainees in Paediatric Neurology are expected to demonstrate the following competence and values:

1. Strong clinical skills in examining and assessing children with neurological and neurodevelopmental conditions, with the ability of differentiating normal variation and identifying abnormalities.
2. Sensitivity and empathy in communicating with children and their families.
3. Leadership and coordination skills while working with other professionals
4. Be a steadfast advocate for the welfare of children

Knowledge

Trainees should acquire experience by admitting, examining, investigating, treating and managing both acute in-patient and also outpatient situations of the following conditions in paediatric neurology and neuro-developmental paediatrics in their day-to-day training.

1. Autism Spectrum disorder
2. Cerebral Palsy
3. Cerebrovascular diseases in children
4. Congenital malformations of the nervous system
5. Demyelinating diseases
6. Developmental delay and other cognitive function disorders
7. Epilepsy
8. Fetal neurology
9. Genetic disorders: including chromosomal abnormality, single gene and multiple gene diseases and syndromes with neurological and developmental impairments
10. Habilitation and Rehabilitation of conditions related to Paediatric Neurology
11. Head injury, including inflicted brain injuries
12. Headaches and migraine
13. Hearing impairment
14. Infections of the nervous system

15. Learning disabilities, including specific learning disabilities.
16. Movement disorders
17. Neonatal neurology
18. Neoplasms of the nervous system
19. Neurobehavioral disorders, including attention deficit –hyperactivity disorders, conduct disorder, opposition-defiant disorder, obsessive-compulsive disorders.
20. Neurodegenerative diseases
21. Neurological emergencies e.g. coma, acute encephalopathy, status epilepticus.
22. Neurological manifestations of system illnesses
23. Neurometabolic diseases, including lysosomal storage diseases, peroxisomal disease, mitochondrial diseases and others.
24. Neuromuscular diseases, including muscular dystrophies, congenital myopathies, spinal muscular atrophy, myasthenia gravis and other related disorders
25. Neuro-ophthalmology
26. Peripheral nervous system diseases
27. Speech disorders
28. Visual impairment
29. Other related neurological and neuroscience topics

Trainees should understand the pathophysiological basis of these conditions. They should be able to discuss these conditions with other clinicians and also to explain and educate patients and their parents regarding these conditions.

Apart from the disease conditions listed above, trainees should also acquire sound knowledge regarding the early development, including embryology of the brain, normal childhood developments in motor, speech, social and cognitive realms, their normal variations and warning signs of aberrations and abnormality.

Trainees should also be able to understand the interconnection between neurological and neurodevelopmental paediatrics with other specialties in paediatrics and to formulate interdisciplinary management plans for children who require the care of other subspecialties.

Clinical Skills

The following skill and competence are expected of a trainee

1. Comprehensive history taking
2. Neurological examination of children of all ages
3. Developmental assessment of children of all ages
4. The use of relevant diagnostic tests and their interpretation
5. Acute and long term management of both acute and chronic neurological conditions
6. Lumbar puncture
7. Performance and interpretation of nerve conduction study
8. Performance and interpretation of electromyography
9. Electroencephalography (reporting and interpretation)
10. Evoked potential studies (reporting and interpretation)
11. Neuro-radiology interpretation
12. Botulinum toxin injection for spasticity

Additional experience

The acquisition of experience in the following areas is desirable, subject to availability. The training in the following areas can be gained by regular (e.g. weekly) clinic sessions with the relevant specialists and can be integrated into the four mandatory training modules:

1. Audiology
2. Child psychiatry
3. Paediatric orthopaedics
4. Inborn errors of metabolism
5. Ophthalmology
6. Neuropathology
7. Neurosurgery
8. Intraoperative electrophysiological monitoring (including monitoring for dorsal rhizotomy and evoked potential monitoring)
9. Epilepsy surgery
10. Clinical or laboratory research
11. Clinical Genetics
12. Speech and language pathology

Teaching skills

Trainees are expected to engage in Paediatric Neurology related teaching activities during their training. These teaching activities can be targeted toward doctors, nurses, allied health professionals, medical students, patients and parents. Such teaching activities should constitute about 5% of the training time of the trainee.

Administrative duties

Trainees are expected to engage in Paediatric Neurology related administrative activities e.g. clinical audits, quality assurance activities and projects. Such administrative duties should constitute about 5% of the training time of the trainee.

Research

Clinical and laboratory research, either organized in a separate module or be integrated into the four mandatory modules, is highly recommended. The trainee is encouraged to write up one original dissertation out of these research activities to be submitted for exit assessment.

D. Outline of the Structure of the PN Training Program

(1) The subspecialty training in paediatric neurology is made up of a minimum of three years of supervised accredited training.

(2) The maximum duration of PN training is six years, from the recruitment date into the program after Fellowship in General Paediatrics. If the trainee is recruited during the higher training phase of General Paediatrics training, the overlapping year (up to one year) will not count toward this six-year period. The trainee must pass the Exit Assessment within this timeframe. Failing to do so will require restarting the PN training program. This policy ensures that candidates possess up-to-date knowledge when taking the Exit Assessment. (2024 Update)

(3) In the training program a trainee is required to go through a minimum of two PN training units and to be under the training and supervision of at least two accredited trainers. The training offered in the different units should be complementary. Adult neurology centers are not counted as PN training units. (2015 Update)

(4) There should be a significant period (generally regarded as the core module) during the Paediatric Neurology Training Program that a trainee has intensive and substantial Paediatric Neurology exposure in one single training unit

(5) A trainer in Paediatric Neurology should take up no more than two trainees (Paediatric Neurology or otherwise) at any one time.

(6) There must be at least one trainer per training unit.

(7) PN trainees can have 6 months PN training including neurodevelopmental/ neurorehabilitation module any time during their higher Paediatric training. (2015 Update)

(8) Within the three-year training duration, trainees are required to report under supervision 500 EEG, 50 NCV, 30 EMG, 50 BAEP, 50 VEP and 10 SSEP. (2015 Update)

(9) Regarding clinical case documentation, same patient receiving different modalities of treatment can be reported more than once. Apart from recording HN number or PED number, adding patient's initials can facilitate recapitulation. (2015 Update)

(10) Presentation by trainees implies presentation in neurology meetings (category B activity) or cluster-based neurology meeting. (2015 Update)

(11) PN trainees are required to submit log sheets every 6 months to the College Secretariat after review by trainers of individual training unit followed by program director. (2015 Update)

(12) Clinical activity should be documented using PN log sheet during adult neurology and DBP training. (2015 Update)

(13) The maximum interruption of PN training is one year prior to completing all required training rotations within the six-year timeframe, except during the overlapping year. All interruptions require prior approval from the PN subspecialty board with valid reasons. (2024 Update)

(14) In order not to have disruption of training activity, trainees attending adult neurology, neurodevelopmental and neurorehabilitation modules are allowed to take leave in proportion of their entitled annual leave. Leave longer that period would be subject to remedial attachment. (2015 Update)

(15) Trainer of individual training unit taking long leave, $\geq$ 4 weeks, would be covered by trainers from other training units, preferably within same megacluster. Program director when informed is responsible for coordinating trainer substitution. (2015 Update)

(16) Only one period of continuous or cumulative 12-week leave (included in the one-year interruption) is allowed during the three-year training program, excluding the overlapping year during higher training in General Paediatrics. (2025 Update)

(17) A trainee taking leave for more than 12-week leave would be required to extend his / her training period to make up for the interruption in

excess during the Paediatric Neurology training.

(18) This 12-week leave includes maternity leave, study leave (not related to paediatric neurology), and sick leave. Statutory holidays and annual leave within the trainee's entitlement are not counted. (2025 Update)

(19) A declaration of any interruption of training should be made by the trainee on his / her application for Subspecialty Board Examination

(20) The training program is divided into four mandatory modules, namely,

Module A: Hospital Based Paediatric Neurology Training
Module B: Adult Neurology Training
Module C: Full-time Neuro-rehabilitation Training
Module D: Full-time Neuro-developmental Paediatrics Training

(21) The mandatory Adult Neurology Training module is included upon the recommendation of the overseas advisors. It is considered necessary not only to broaden the scope of neurology training, but also to provide the essential skills of neurological examination in adults and of lesion localization.

(22) The purpose of segregating neuro-rehabilitation and neuro-developmental paediatrics into distinct full-time modules is not to regard them as separate areas of Paediatric Neurology. The purpose is to enhance the training in these areas of rehabilitation and neuro-developmental paediatrics by engaging the trainee in a full-time training period. These two modules are designed to intensify the training in these two areas. Training in rehabilitation and neuro-developmental paediatrics can also occur during other modules, especially module A (hospital based paediatric neurology training).

(23) For training in both DBP and PN with overlapping modules, exemption of 6 months is a maximum duration, subject to mutual agreement with both specialties. (2015 Update)

(24) Training at a paediatric neurology, neuro-rehabilitation or

neuro-developmental paediatric centre overseas for a period of 6 months or more is highly recommended.

(25) In the event that a trainee completes the four mandatory training modules before his / her successful passage through the exit assessment, he / she is allowed to engage in an elective training no longer than 6 months in other related fields that are listed, but not limited to, the following, subject to approval by the Subspecialty Board and the Subspecialty Program Director:

Child psychiatry Clinical genetics
Clinical or laboratory research related to paediatric neurology and neuro-developmental paediatrics
Community Paediatrics
Neuro-metabolic diseases
Neuro-ophthalmology
Neuropathology
Neurosurgery
Paediatric orthopaedics

(26) Upon the completion of all the training modules, a trainee is required to sit an exit assessment and an examination. Trainees who are successful at the exit assessment and an examination will be recommended to receive the Paediatric Neurology Subspecialty Certificate of the Hong Kong College of Paediatricians and be eligible for being listed as Specialist in Paediatric Neurology, subject to approval by the Medical Council of Hong Kong.

The Training Program Structure will be described in detail in the following pages (pages 10 to 14).

Module A – Hospital Based Paediatric Neurology Training (the "Core Module")

(1) A minimum period of 24 months training in a hospital setting is required.

(2) This period is dedicated to the acquisition of experience and skills in

looking after acute and chronic neurological problems in neonates, children and adolescents in the in-patient hospital setting. The in-patient clinical work includes ward rounds, clinical consultations, academic meetings and presentations.

(3) There should be training in a regular out-patient setting where children are managed and followed up regularly at subspecialty clinics.

(4) Training at in-patient and out-patient settings should be conducted concurrently with equal emphasis.

(5) This is also the period when specialized skills in electrophysiological tests, neurological investigations and treatment measures should be learned.

(6) A trainee is expected to acquire the ability of history-taking, neurological examination, developmental assessment, the rational ordering and interpretation of pertinent neurological investigations, the ability to plan and offer comprehensive management and treatment, the organization of appropriate follow-up and re-evaluation of patients.

(7) The trainee is also expected to acquire the skill of working with different healthcare providers both in the hospital and the community so that multidisciplinary care can be rendered to the patients.

(8) At least one year of the training in this module shall be conducted in a hospital that provides paediatric and neonatal intensive care service and emergency room service.

Module B: Adult Neurology Training

(1) A minimum period of 3 months training in hospital based adult neurology training is required.

(2) This period of training shall consist of supervised clinical work in a hospital fully accredited for subspecialty training in Adult Neurology by the Hong Kong College of Physicians to provide 24 months of adult neurology training. As of July 2013, there are nine hospitals fully accredited for adult neurology training, namely:

Kwong Wah Hospital
Princess Margaret Hospital
Prince of Wales Hospital
Pamela Youde Nethersole Eastern Hospital
Queen Elizabeth Hospital
Queen Mary Hospital
Ruttonjee Hospital
Tuen Mun Hospital
United Christian Hospital

(3) This period is dedicated to the acquisition of experience and skills in looking after acute and chronic neurological problems in adults in the in-patient hospital setting. The in-patient clinical work includes ward rounds, clinical consultations, academic meetings and presentations.

(4) There should be training in a regular out-patient setting where adult patients are managed and followed up regularly at subspecialty clinics.

(5) Training at in-patient and out-patient settings should be conducted concurrently with equal emphasis.

(6) A trainee is expected to acquire the ability of history-taking, neurological examination, rational ordering and interpretation of pertinent neurological investigations, the ability to plan and offer comprehensive management and treatment, the organization of appropriate follow-up and re-evaluation of patients.

(7) Due to the practical consideration of manpower arrangements, a trainee in this module will join the Adult Neurology Training Program full-time during the daytime, but can return to his / her parent Paediatric unit to assume on-call duties.

Module C: Paediatric Neuro-rehabilitation Training

(1) This module is designated to be a full time supervised training in an institution or hospital dedicated to the rehabilitation – habilitation of children with neurological conditions.

(2) A minimum period of 3 months full-time training in Paediatric Neuro-rehabilitation is required. Full-time training should be construed as occupying the normal day-time work hours during the training period.

(3) This period is dedicated to the acquisition of experience and skills in the assessment, planning and provision of neurological rehabilitation to children with acute or chronic neurological conditions. The clinical work in this module should be provided both at the in-patient and the out-patient setting. It can be in the form of ward rounds, rehabilitation clinics, clinical consultations, specialized rehabilitation (especially multidisciplinary) programs (for instance, botulinum toxin program, rhizotomy program, spina bifida program etc), academic meetings and presentations.

(4) During this module a trainee is expected to acquire the skills of applying relevant and appropriate assessment tools (e.g. different assessment tools and scales, application of the international classification of function model etc), neurophysiological tests (e.g. electromyography, nerve conduction studies, gait analysis) and the use of specific treatment modalities (e.g. botulinum toxin injection for spasticity using ultrasound or EMG guidance etc).

(5) A trainee is also expected to gain experience and knowledge of working in a multidisciplinary environment involving different

professionals in the hospital and the community.

(6) A trainee should also acquire the insight of the organization of community service provision for children and adolescents with neurological conditions that is prevailing in Hong Kong.

(7) This module of training need not be conducted in an acute hospital with intensive care facilities or emergency room service.

Module D: Neuro-developmental Paediatrics

(1) This module is designated to be a full time supervised training in an institution or hospital dedicated to the care of children with neuro-developmental conditions like developmental delay, attention deficit – hyperactivity disorder, autism spectrum disorder, speech disorder, behavioral problem and other conditions that may have a significant overlap with neurological disorders, or may be commonly co-existing in children with neurological conditions.

(2) A minimum period of 3 months full time training in Neuro-developmental Paediatrics is required. Full-time training should be construed as occupying the normal day-time work hours during the training period.

(3) This period is dedicated to the acquisition of experience and skills in the assessment, diagnosis, counseling and management of children with neuro-developmental conditions that may or may not have an organic basis. The clinical work in this module should be provided mainly at the out-patient setting. It can be in the form of ward rounds, out-patient clinics, clinical consultations, academic meetings and presentations.

(4) During this module a trainee is expected to acquire the skills of applying relevant and appropriate assessment tools (e.g. different assessment tools and scales, DSM diagnostic criteria, application of the World Health Organization International Classification of Function, Health and Disability model etc), specific

neuro-developmental tests (e.g. questionnaires, specific tests for autistic symptoms etc) and the counseling skills for children and parents.

(5) A trainee is also expected to gain experience and knowledge of working in a multidisciplinary environment involving different professionals in the institution and the community.

(6) A trainee should also acquire the insight of the organization of community service provision for children and adolescents with neuro-developmental conditions that is prevailing in Hong Kong.

(7) This module of training can be conducted in units that are accredited in 2013 to provide training in the newly established Developmental and Behavioral Paediatrics Subspecialty (DBP). The workload and facilities provided by these units fulfills the requirement listed in page 17 - 18. These accredited training units include:

Six Child Assessment Centres (Central Kowloon, Pamela Youde Kwun Tong, Pamela Youde Shatin, Tuen Mun, Ha Kwai Chung and Fanling) of the Child Assessment Service, Department of Health, Hong Kong SAR Government and
Duchess of Kent Child Assessment Centre, Hospital Authority and University of Hong Kong.

E. Institutional Requirements – Standards for the accreditation of Paediatric Neurology Training Units for the different modules

(1) This section describes the facilities and workload required of a unit to be eligible for accreditation as a training unit in the different modules of training.

(2) Inspection of the training units of each module will be conducted before the commencement of the Paediatric Neurology Training Program to establish the first training units.

(3) After the program has started, existing training units will be subject to re-inspection and re-accreditation every 5 years or from time to time when the Subspecialty Board deems necessary.

(4) The institutional requirements for the different modules in this section are subject to the review of the Subspecialty Board from time to time as necessary.

(5) An overseas training centre that provides training in this training program should have a standard and caseload that is broadly equivalent to the standard listed below for that particular module of training.

(6) The Chief of Service of a Training Centre should inform the Subspecialty Board when there are any changes that may have an effect on the training program in the Training Centre.

Module A: Hospital Based Paediatric Neurology Training

The unit that provides training in hospital based paediatric neurology (Training Module A) should be a hospital or a training unit cluster made up of a group of hospitals where the trainees and trainers would dedicate at least 50% of work in paediatric neurology. It should contain the following facilities on-site:

a. General paediatric wards with a capacity of seven or more paediatric neurology beds that has an average occupancy rate of 80% with regular emergency and non-emergency admissions and

consultations for patients with neurological conditions. If there is no designated paediatric neurology bed in the hospital, the paediatric department should have paediatric neurology patient number that is equivalent to the aforementioned volume to allow adequate training opportunity during the module. The number of new admission of paediatric neurology patients shall be at least 450 cases per year. The case complexity should be mixed so that about 20% of the patients are in the highly complex or the complex categories, while the other 80% should be patients in the intermediate and simple categories. (For a description of the complexity of cases please refer to the appendix on page 28 - 29).

b. There should be a designated paediatric neurology team that comprises of the accredited trainer(s) and the trainee(s) existing in the hospital.

c. Regular outpatient neurology service that is dedicated to neurological patients and conducted under supervision. Such outpatient clinic should be held at least twice a week.

d. The hospital should have the capacity to perform and provide training of the clinical skills required for the subspecialty listed in page 5.

e. Collaboration with paraclinical and non-clinical supporting services including physiotherapy and occupational therapy, clinical psychologist, social worker etc.

f. Laboratory and diagnostic facilities: electrophysiology, radiology, neuropathology, microbiology and clinical chemistry services

g. Regular quality control procedures, including audit and autopsy

h. High quality medical records with easy accessibility

i. Affiliation with rehabilitation facilities

j. Structured educational program, including grand round, journal

clubs and presentations in neurology

k. Paediatric and neonatal intensive care facilities.

A hospital that fulfills the above criteria from (a) to (k) shall be accredited to provide a training of no more than 27 months within the 3 years of subspecialty training.

A hospital that fulfills only (a) to (j), i.e. a hospital without either paediatric or neonatal intensive care facilities, shall be accredited to provide a training of no more than 18 months within the 3 years of subspecialty training in Paediatric neurology.

The existence of on-site neurosurgical service at the training unit is highly preferable. If such service is not present in the training unit, a period of training at a paediatric or adult neurology training unit with on-site neurosurgical service is recommended.

Module B: Adult Neurology Training

The unit that provides training in Adult Neurology (Training module B) shall be a hospital that is fully accredited by the Hong Kong College of Physicians to provide training in adult neurology. The training should be led by accredited trainers listed by the Hong Kong College of Physicians. In general the hospital should provide the following facilities on-site:

a. Admission wards with regular admissions and consultations for patients with neurological conditions.

b. Regular outpatient neurology service that is dedicated to neurological patients and conducted under supervision.

c. Collaboration with para-clinical and non-clinical supporting services including physiotherapy and occupational therapy, clinical psychologist, social worker etc.

d. Laboratory and diagnostic facilities: electrophysiology, radiology, neuropathology, microbiology and clinical chemistry services

e. Regular quality control procedures, including audit and autopsy

f. High quality medical records with easy accessibility

g. Structured educational program, including grand round, journal clubs and presentations in neurology

h. Intensive care facilities.

Module C: Paediatric Neuro-rehabilitation Training

The unit that provides training in Neuro-rehabilitation training (Training Module C) should be a hospital or institution where the trainee would devote his work to rehabilitation of children and adolescents with neurological conditions. The unit should contain the following facilities on-site:

a. To qualify for full time training, the institution or hospital should operate a regular daily neuro-rehabilitation service, either in-patient, out- patient or a mixture of both, that is dedicated to rehabilitation of children with neurological and developmental disabilities. Such service should be conducted under supervision. There shall be a daily activity of at least 5 patient attendances a day for out-patient service, or a 7 bed capacity for in-patient service with an average occupancy not less than 80%. If there is no designated paediatric rehabilitation bed in the institution, the institution should have paediatric in-patient number that is equivalent to the aforementioned volume to allow adequate training opportunity during the module. The number of new admission of new paediatric neuro-rehabilitation patients shall be at least 30 cases per year. The case complexity should be mixed so that about 20% of the patients are in the highly complex or the complex categories, while the other 80% should be patients in the intermediate and simple categories. (For a description of the complexity of cases please refer to the appendix on page 28 - 29).

b. Collaboration with paraclinical and non-clinical supporting services including physiotherapy and occupational therapy, prosthetics and orthotics service, clinical psychologist, social

worker etc.

c. Laboratory and diagnostic facilities: electrophysiology and radiology facilities are required.

d. Regular audit procedures on clinical outcomes.

e. High quality medical records with easy accessibility

f. Structured educational program, including grand round, journal clubs and presentations in neuro-rehabilitation.

Module D: Neuro-developmental Paediatrics

The unit that provides training in Neuro-developmental paediatrics training (Training Module D) should be a hospital or institution where the trainee would devote his work on the assessment and management of children and adolescents with neuro-developmental conditions. The unit should contain the following facilities on-site:

a. Regular daily neuro-developmental paediatrics service that is dedicated to assessment and management of children with neurological and developmental disabilities. Such service should be conducted under supervision. The institution shall have no fewer than 300 new patients a year and 3000 patient attendances a year. The case complexity should be mixed so that about 20% of the patients are in the highly complex or the complex categories, while the other 80% should be patients in the intermediate and simple categories. (For a description of the complexity of cases please refer to the appendix on page 28 - 29).

b. Collaboration with paraclinical and non-clinical supporting services including child psychiatrists, clinical psychologist, speech therapists, social worker etc.

c. Regular audit procedures on clinical outcomes.

d. High quality medical records with easy accessibility

e. Affiliation with rehabilitation facilities

f. Structured educational program, including clinical meetings, journal clubs and presentations in developmental paediatrics.

Elective Modules

For the elective modules, the units providing such training should have an adequate amount of caseload and a reasonable array of facilities that will allow the provision of meaningful and adequate training to the trainee in that particular module. Such adequacy of both caseload and facilities will be assessed by the Subspecialty Board, possibly with the advice from the relevant professional bodies.

Overseas Training

Overseas training shall be conducted at a reputable paediatric neurology, neuro-rehabilitation or neuro-developmental paediatrics centre. The trainee planning for overseas training shall obtain prior approval from the Subspecialty Board before embarking on the training. The trainee will have to specify which of the four mandatory modules the overseas training shall account for. If the overseas training is an elective module outside the four mandatory modules, the trainee will have to provide details of the training program and to specify the area of training. The overseas training centre should have a standard and caseload that is broadly equivalent to the standard for the relevant training module listed above.

F. Ongoing Assessment of the Trainee

(1) A trainee in this program is expected to keep log of the activities and experience by means of a log book.

(2) The log book shall be submitted to review by the Subspecialty Trainer at the institution the trainee is attending and also by the Subspecialty Board and Director at regular intervals. At the review the progress of the trainee will be scrutinized by the trainer and the Board.

(3) The frequency of such review shall be at least once every year.

(4) A trainee must make at least two presentations in local or regional meetings.

(5) Trainees are encouraged to provide evidence of Personal Development.

(6) Trainees are encouraged to attend training courses in Paediatric Neurology held locally or overseas.

G. Exit Assessment and Examination

(1) At the end of the three-year training trainees are required to satisfy the Paediatric Neurology Subspecialty Board Members that they have acquired the knowledge and skills to qualify as a subspecialist in Paediatric Neurology.

(2) The assessment, which will be held at appropriate frequency (usually once a year) as the Subspecialty Board determines, shall be in the form of:

(a) Two original dissertations submitted for appraisal. One of the dissertations should be accepted for publication by peer reviewed journal, either local or overseas. The other dissertation can be the same as the dissertation submitted for Exit Assessment at the end of Higher Training in General Paediatrics. The trainee should be prepared to discuss the

dissertations in detail during an oral examination.

(b) An Exit Assessment of about one-hour duration, in the format of oral, written or clinical examination, will be conducted on evaluation of candidate's dissertation, and knowledge of different topics in paediatric neurology, neuro-rehabilitation, and behavioural and developmental paediatrics. Electroencephalogram, electrophysiology study, neuroimaging and data interpretations can be included in the examination. Remedial assessment for candidates failing the exit examination will be provided. (2025 Update)

(3) A candidate will be considered to have passed the exit assessment only if he/she passes both the assessment of the dissertation and the examination.

(4) A candidate who has failed the exit assessment shall continue to pursue training as directed by the Subspecialty Training Director and the Subspecialty Board until the candidate successfully passes subsequent exit assessment.

(5) The candidate needs only to re-sit the part of exit assessment he/she has failed in the previous assessment.

(6) The Subspecialty Board shall determine the format of the examination as stipulated in point 2 (b) above. Trainees will be notified of the format of the examination. The notification will normally be given to the trainees six months or more before the examination takes place.

(7) The assessment and examination shall be conducted by at least three examiners appointed by the Subspecialty Board. The examiners can be qualified Paediatric Neurology Trainers or neurology experts invited from the Hong Kong College of Physicians or paediatric neurology experts from overseas. Trainers who have provided supervision to the candidate undertaking the assessment and examination shall not be selected as examiner. Examiners should declare any potential conflict of interest to the Subspecialty Board before the examination takes place.

(8) The topics and questions covered in the examination, the scoring system and a minimum passing score will be determined by the Subspecialty Board before the examination.

(9) The Subspecialty Board may invite external overseas examiners of international reputation as referees to conduct or supervise the exit assessment and examination and to ensure the standard of the examination and assessment.

(10) The Subspecialty Board shall decide on the details of the rules and regulations pertaining to exit assessment and examination, e.g. the maximum number of times a trainee can sit for examination.

H. Paediatric Neurology Subspecialty Board

(1) The Subspecialty Board shall be formed by five fellows in paediatric neurology from the universities, Hospital Authority and private sector as appropriate, plus one fellow who is appointed by the Council of the College.

(2) The Board Chairman shall be a Paediatric Neurology Fellow elected by the Subspecialty Board and be appointed by the Council of the College. He / She should be a trainer actively engaged in full-time training of Paediatric Neurology trainees.

(3) The term of office of the Subspecialty Board and the Board Chairman shall be three years.

(4) The Chairman is eligible for election for a maximum of two consecutive terms.

(5) The Subspecialty Board shall be responsible for:
- (a) setting the accreditation guidelines for the training program in paediatric neurology
- (b) accrediting the subspecialty training program
- (c) setting the criteria for accreditation of training modules within the training program
- (d) accrediting local and overseas institutions for the duration and type of training allowed by the Subspecialty Board
- (e) accrediting and appointing Subspecialty Training Program Director and Subspecialty Trainers
- (f) ensuring a high standard of practice in paediatric neurology that is comparable to that in overseas centres by arranging peer review of the paediatric neurology training program
- (g) inviting overseas paediatric neurology specialist to be referees in the training program and the examinations and assessments
- (h) appointing examiners and organizing Subspecialty Board Examinations
- (i) setting the scope and questions of the exit assessment and examination, devising a scoring system and setting of a minimum passing score for each examination.

(j) delineating the rules and regulations pertaining to the exit assessment and examination

(k) the administration, organization and validation of continuing medical education which must be fulfilled by all fellows in paediatric neurology in addition to the CME requirement for general paediatrics of the Hong Kong College of Paediatricians.

I. Subspecialty Program Director

(1) The Subspecialty Program Director is appointed by the Subspecialty Board to supervise the training progress of all trainees. He / She should be a trainer actively engaged in full-time training of Paediatric Neurology trainees.

(2) The Subspecialty Program Director must:
- (a) be a Fellow of the College in the Subspecialty (either as First Fellow or Fellow with accredited supervised subspecialty training)
- (b) have 10 years of experience of good practice excluding the training period in the subspecialty in an accredited institution
- (c) be actively involved in teaching as evidence by teaching of postgraduates in the subspecialty
- (d) be actively participating in clinical audit and establishment of management guidelines
- (e) be active in research with track record in scientific publications
- (f) participate and fulfill the continuing medical education requirement of the subspecialty
- (g) have local, regional or international standing in that subspecialty as evidenced by membership of learned societies, invitation for lectures and participation in regional and international meetings / organizations.
- (h) fulfill the guidelines for admission of First Fellows in a New Subspecialty of the Hong Kong Academy of Medicine or be a Fellow in that subspecialty with accredited supervised subspecialty raining.
- (i) spend more than 50% of his / her activity in the practice of the subspecialty
- (j) may be required to provide a certificate of competency if technically complex skills
- (k) be re-accredited once very three years

(3) The Subspecialty Program Director shall be responsible for:
- (l) monitoring the progress of training of the trainee to ensure fulfillment of the requirement of the program
- (m) reviewing the progress with trainee and make appropriate

arrangements and recommendations regarding the training arrangements of the trainee

(n) ensuring the completion of the training of a trainee within a reasonable time frame.

(o) reporting the progress of training of the trainee to the Subspecialty Board

J. Trainers

(1) A trainer in Paediatric Neurology Subspecialty must be a Fellow of Paediatric Neurology of the Hong Kong College of Paediatricians (either as First Fellow or a Fellow with accredited training in Paediatric Neurology.

(2) A trainer must also have three years of experience of good practice excluding the training period in Paediatric Neurology in an accredited institution. This requirement will be temporarily suspended in the first three years of establishment of the Paediatric Neurology Subspecialty.

(3) A trainer must be working as a full-time staff in a training unit and actively involved in teaching, research and clinical service of Paediatric Neurology.

(4) The Subspecialty Trainers are appointed by the Subspecialty Board to supervise the training progress of trainees.

(5) One Trainer shall be responsible for no more than two trainees at any one time.

(6) The Subspecialty Trainer shall be responsible for:

(a) providing day-to-day training and supervision to the trainee

(b) reviewing the progress of the trainee regularly

(c) reporting the progress of training of the trainee to the Subspecialty Director and the Board regularly

K. Appendix IV – Complexity of cases in Paediatric Neurology with examples

The following is a list of description and examples of PN cases of highly complex, complex, intermediate and simple categories.

Highly complex

Highly complex conditions are those that must be managed in a tertiary or quaternary centre. High level of expertise and experience are required in their care. Often the management involves the use of sophisticated interventions and investigations. Elaborate planning and input from multiple specialties are often required. In some situations the complexity lies in the diagnostic and therapeutic processes, where the diagnosis cannot be made easily or difficulty in treatment decision are encountered.

Examples: Doral rhizotomy candidates. Epilepsy surgery candidates requiring specialized investigative and evaluation techniques. Cerebral palsy and movement disorder patients requiring high end intervention e.g. deep brain stimulation, single event multilevel orthopaedic surgery, intrathecal baclofen. Neurological emergencies that requires PICU facilities e.g. status epilepticus, head injury, stroke, coma and acute encephalopathy. Rare neuromuscular, neurometabolic and neurogenetic diseases. CNS neoplasms. Complex neonatal neurological conditions e.g neonatal seizures.

Complex

Complex conditions are those that can be managed in tertiary setting. The cases are usually definitively diagnosed but treatment decisions are complex and require a high level of expertise. The condition is often chronic or associated with multiple co-morbidities. Input from other specialties as well as the paediatric neurologist is often required.

Examples: Cerebral palsy patients of poor Gross Motor Function Classification System (GMFCS) level. Intractable epilepsy. More common neurometabolic and neurogenetic diseases. Neurodegenerative diseases where the diagnosis was made. Autistic, ADHD and cognitively impairment children with co-morbidities. Neonatal neurological conditions like neonatal encephalopathy. Neuromuscular diseases like Spinal Muscular Atrophy, Duchenne Muscular Dystrophy.

Intermediate

Intermediate conditions are those that can be managed in secondary level setting. The diagnosis and management pathway have been established but ongoing management requires the constant supervision, evaluation and adjustments from paediatric neurologists.

Examples: Cerebral palsy patients of intermediate GMFCS level, well controlled epileptic patient still receiving medications, simple neurobehavioral conditions without co-morbidity. Intractable or modified headaches.

Simple

Simple conditions are those that can be managed in primary or secondary level setting. The condition is clearly diagnosed and management was effective, or that no management other than continuing surveillance is required.

Examples: Stable visual, hearing and cognitive impairment, episodic seizure disorders, primary headaches. Cerebral palsy patients of high GMFCS levels.

The examples listed in the above categories are not exhaustive. They are only used to illustrate the general principle in dividing different neurological conditions into the four levels.

L. Postscript

Wherever appropriate, the Paediatric Neurology Program should comply with the “Guidelines on the Criteria for the Accreditation of a Paediatric Subspecialty Training Programme of the Hong Kong College of Paediatricians.”

The training program, institutional requirements and details relating to the formation of the Subspecialty Board shall be subject to review and revision from time to time as the need arises. Any such revisions arising shall be subject to approval by the Hong Kong College of Paediatricians and the Hong Kong Academy of Medicine.

M. Versions

First Proposal endorsed by the Council of the Paediatric Neurology Association of Hong Kong 28 December 2010

First Amendment according to Recommendation from Vetting Committee of The Hong Kong College of Paediatricians 28 April 2011

Second Amendment after 3rd Council meeting of the Paediatric Neurology Association of Hong Kong on 26 July 2012 (minor amendment to reflect the original intention regarding the role of the Training Director on page XVI)

Third Amendment after 4th Council meeting of the Paediatric Neurology Association of Hong Kong on 5 November 2012 (amendment in response to the requirement of the Working Group for Accreditation of Paediatric Subspecialties in Hong Kong on 13 August 2012)

Fourth Amendment after 5th Council Meeting of the Paediatric Neurology Association of Hong Kong on 16 January 2013 (amendment in response to the requirement of the Working Group for Accreditation of Paediatric Subspecialties in Hong Kong on 17 November 2012)

Fifth Amendment after Ad Hoc Meeting of the Paediatric Neurology Association of Hong Kong on 19 February 2013 (amendments adjusting the case complexity distribution, the permission of part-time log-based training for Neuro-rehabilitation training and the addition of institutional requirement of Neuro-rehabilitation and Neuro-developmental Paediatrics modules)

Sixth Amendment after Accreditation Visit by Professor Robert Ouvrier, external assessor invited by the Hong Kong College of Paediatricians. This amendment is made by the Provisional Paediatric Neurology Subspecialty Board. Part-time log-based Neuro-Rehabilitation Training is deleted from the training program)