SPECIALTY TRAINING CURRICULUM

FOR

NEUROLOGY

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1 Introduction

Neurology is the specialty encompassing the diagnosis, investigation and long term management of adults with neurological symptoms and diseases.

The specialty also involves the care of patients with stroke disease and some trainees may elect to undertake an additional one year training scheme in stroke medicine to achieve subspecialty recognition. Some neurology trainees may also elect to undertake dual training in neurology and neurophysiology or other subspecialty. Equally neurophysiology trainees complete 12 months training in neurology within the neurophysiology training programme.

2 Rationale

2.1 Purpose of the Curriculum

The purpose of this curriculum is to define the process of training and the competencies needed for the award of a certificate of completion of training (CCT) in neurology. This curriculum covers the period of training following successful completion of both a two year Foundation Programme and a two year Core Medical Training (CMT) Programme, through to the recognised award of CCT.

The curriculum covers training for all four nations of the UK.

2.2 Development

This curriculum was developed in 2009 by the Specialty Advisory Committee (SAC) for neurology under the direction of the Joint Royal Colleges of Physicians Training Board (JRCPTB). It was written by the curriculum sub-committee, which included both a lay and trainee representative, and reviewed by the full SAC. It replaces the previous version of the curriculum dated 2007, with changes to ensure the curriculum meets GMC's standards for Curricula and Assessment, and to incorporate revisions to the content and delivery of the training programme. Major changes from the previous curriculum include the incorporation of leadership, health inequalities and common competencies.

2.3 Training Pathway

Specialty training in Neurology consists of core and higher speciality training. Core training provides physicians with: the ability to investigate, treat and diagnose patients with acute and chronic medical symptoms; and with high quality review skills for managing inpatients and outpatients. Higher speciality training then builds on these core skills to develop the specific competencies required to practise independently as a consultant Neurologist.

Core training may be completed in a Core Medical Training (CMT) or Acute Care Common Stem (ACCS) programme. The full curriculum for specialty training in Neurology therefore consists of the curriculum for either CMT or ACCS plus this specialty training curriculum for Neurology.

The approved curriculum for CMT is a sub-set of the Curriculum for General Internal Medicine (GIM). A "Framework for CMT" has been created for the convenience of trainees, supervisors, tutors and programme directors. The body of the Framework document has been extracted from the approved curriculum but only includes the

syllabus requirements for CMT and not the further requirements for acquiring a CCT in GIM.

For those trainees undertaking CMT or ACCS, acquisition of full MRCP (UK) will be required before entry into Specialty training at ST3 (2011 onwards).

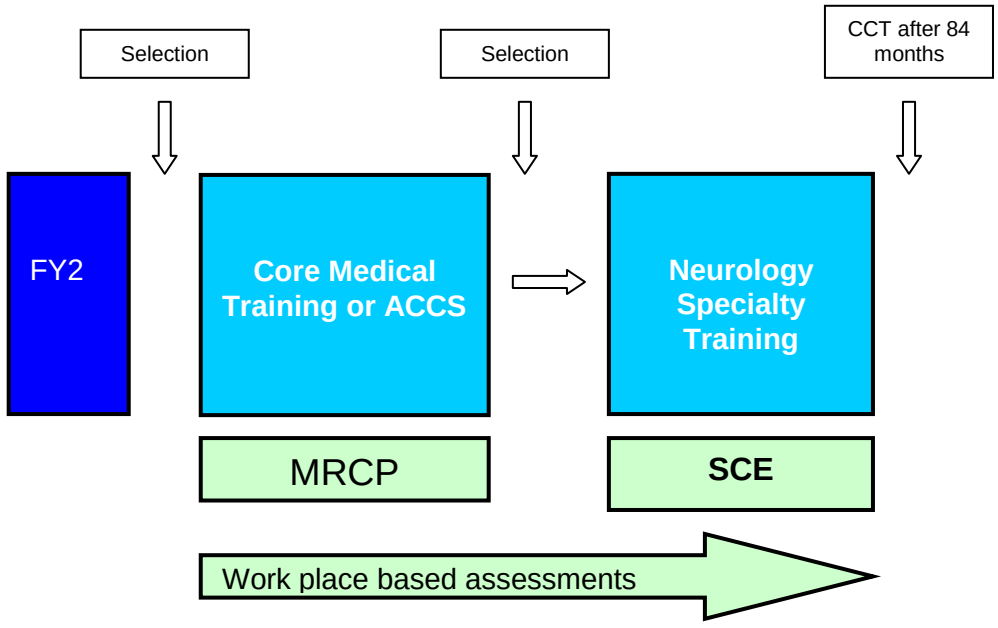
2.4 Enrolment with JRCPTB

Trainees are required to register for specialist training with JRCPTB at the start of their training programmes. Enrolment with JRCPTB, including the complete payment of enrolment fees, is required before JRCPTB will be able to recommend trainees for a CCT. Trainees can enrol online at www.jrcptb.org.uk.

2.5 Duration of Training

Although this curriculum is competency based, the duration of training must meet the European minimum of 4 years for full time specialty training adjusted accordingly for flexible training (EU directive 2005/36/EC). However the SAC has advised that training from ST1 will usually be completed in 7 years in full time training (2 years core plus 5 years specialty training). This is because the SAC believe it will take 5 years of full time specialty training for trainees to achieve all the competencies set out in this curriculum particularly in light of changes in training opportunities as the result of the European Working Time Directives.

If trainees are undertaking sub-speciality training in Stroke Medicine, the SAC has advised a further 12 months training will be required to complete all the necessary competencies.



2.6 Less Than Full Time Training (LTFT)

Trainees who are unable to work full-time are entitled to opt for less than full time training programmes. EC Directive 2005/36/EC requires that:

- LTFT shall meet the same requirements as full-time training, from which it will differ only in the possibility of limiting participation in medical activities.

- The competent authorities shall ensure that the competencies achieved and the quality of part-time training are not less than those of full-time trainees.

The above provisions must be adhered to. LTFT trainees should undertake a pro rata share of the out-of-hours duties (including on-call and other out-of-hours commitments) required of their full-time colleagues in the same programme and at the equivalent stage.

EC Directive 2005/36/EC states that there is no longer a minimum time requirement on training for LTFT trainees. In the past, less than full time trainees were required to work a minimum of 50% of full time. With competence-based training, in order to retain competence, in addition to acquiring new skills, less than full time trainees would still normally be expected to work a minimum of 50% of full time. If you are returning or converting to training at less than full time please complete the LTFT application form on the JRCPTB website www.jrcptb.org.uk .

Funding for LTFT is from deaneries and these posts are not supernumerary. Ideally therefore 2 LTFT trainees should share one post to provide appropriate service cover.

Less than full time trainees should assume that their clinical training will be of a duration pro-rata with the time indicated/recommended, but this should be reviewed during annual appraisal by their TPD and chair of STC and Deanery Associate Dean for LTFT training. As long as the statutory European Minimum Training Time (if relevant), has been exceeded, then indicative training times as stated in curricula may be adjusted in line with the achievement of all stated competencies**.**

2.7 Dual CCT

Trainees who wish to achieve a CCT in another speciality as well as neurology must have applied for and successfully entered a training programme which was advertised openly as a dual training programme. Trainees will need to achieve the competencies, with assessment evidence, as described in both the neurology and second curricula. Individual assessments may provide evidence towards competencies from both curricula. Postgraduate Deans wishing to advertise such programmes should ensure that they meet the requirements of both SACs.

If trainees wish to register for dual CCT following appointment to a ST3 post, this will need approval of the deanery, STC Chair/TPD and SAC. It is not guaranteed that post JRCPTB enrolment requests will be granted.

3 Content of Learning

3.1 Programme Content and Objectives

The neurology syllabus below sets out the general and professional content, as well as specialty specific (major topics and allied topics) content that need to be mastered. Demonstration of completion of all these competencies is required to achieve a CCT in neurology.

3.2 Good Medical Practice

In preparation for the introduction of licensing and revalidation, the General Medical Council has translated Good Medical Practice into a Framework for Appraisal and

Assessment which provides a foundation for the development of the appraisal and assessment system for revalidation. The Framework can be accessed at http://www.gmc-uk.org/Framework_4_3.pdf_25396256.pdf

The Framework for Appraisal and Assessment covers the following domains:
Domain 1 – Knowledge, Skills and Performance
Domain 2 – Safety and Quality
Domain 3 – Communication, Partnership and Teamwork
Domain 4 – Maintaining Trust

The "GMP" column in the syllabus defines which of the 4 domains of the Good Medical Practice Framework for Appraisal and Assessment are addressed by each competency. Most parts of the syllabus relate to "Knowledge, Skills and Performance" but some parts will also relate to other domains.

3.3 Syllabus

In the tables below, the "Assessment Methods" shown are those that are appropriate as **possible** methods that could be used to assess each competency. It is not expected that all competencies will be assessed and that where they are assessed not every method will be used. See section 5.2 for more details.

The assessments are marked as mandatory (M) or recommended (R) within the syllabus. This reflects the need for trainees to show competencies across the breadth of the curriculum with particular emphasis on the most important topics within the curriculum. It is expected trainees produce evidence of at least one satisfactory assessment from all the mandatory topics for the attainment of a CCT in neurology.

"GMP" defines which of the 4 domains of the Good Medical Practice Framework for Appraisal and Assessment are addressed by each competency. See section 3.2 for more details.

The Medical Leadership Competency Framework, developed by the Academy of Medical Royal Colleges and the NHS Institute for Innovation and Improvement, has informed the inclusion of leadership competencies in this curriculum. The Framework identified possible assessment methods, but in reviewing these we identified a need for more specific methods. JRCPTB and the RCP Education Department have established a working group to develop and evaluate leadership assessment methods. These may include variants of CbD and ACAT, as well as the Case Conference Assessment Tool currently being piloted.

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1. General and Professional Content

1.1 History Taking

Knowledge	Assessment Methods	GMP
Ability to take a medical and neurological history.	mini-CEX, CbD	1,2,3,4
Understand the differences between open and closed questioning.	mini-CEX, CbD	1,2,3,4
Skills		
Able to take an appropriate, focussed and comprehensive history, including where appropriate information from others, and communicate this verbally or in writing and in summary form.	mini-CEX, CbD **(R)**	1,2,3,4
Be aware of the possible influence of, and sensitively include questions about, socio-economic status, household poverty, employment status and social capital in taking a medical history.	mini-CEX, CbD	1,3,4
Behaviours		
Ability to listen and deal with complex patients (e.g. angry or distressed patient). Appropriate use of an interpreter for patients & families when English is not their first language.	mini-CEX, CbD, MSF	1,2,3,4
Be aware of one's own behaviour and how it might impact on patients' health issues.	mini-CEX, CbD, PS	1,3

1.2 Neurological Examination

Knowledge	Assessment Methods	GMP
A thorough working knowledge of neuroanatomy.	SCE, mini-CEX, CbD	1,2,3,4
Skills		
Able to undertake an appropriate, focussed and comprehensive examination of mental and physical state and communicate this verbally or in writing and in summary form.	mini-CEX, CbD **(R)**	1, 2,3,4
Behaviours		
Use of chaperone where appropriate, respect for patient's personal dignity.	mini-CEX, CbD, MSF	1,2,3,4
Adopt assessments and interventions that are inclusive, respectful of diversity and patient-centred.	mini-CEX, CbD, MSF, PS	1,3

1.3 Communication Skills

Knowledge	Assessment Methods	GMP
Ability to communicate in English language verbally and in writing.	mini-CEX, CbD	1,2,3,4
Skills		
Use of a Dictaphone, discharge summaries, legibility of case notes. Ability to negotiate with patients, relatives and fellow healthcare professionals.	mini-CEX, CbD, MSF	1,2,3,4
Consideration and time shown to those with visual and auditory impairments.	mini-CEX, CbD, MSF	1,2,3,4
Communicate effectively with patients from diverse backgrounds and	mini-CEX, CbD	1,3

those with special communication needs, such as the need for interpreters, etc.		
Behaviours		
Able to communicate effectively with the patient, their family and carers and other staff in relation to the individual needs of the patient and with appropriate regard for confidentiality. Individual cultural, religious & educational parameters must be taken into consideration.	MSF	1,2,3,4
Able to give a prognosis, to explain the patient's condition, to break bad news, to obtain full and informed consent for investigations and treatment.	MSF	1,2,3,4
Able to inform concerning patient support groups and relevant charities.	MSF	1,2,3,4
Able to summarise clinical case in a coherent manner to clinical colleagues.	MSF	1,2,3,4

1.4 Differential Diagnosis, Investigation and Initial Management

Knowledge	Assessment Methods	GMP
Knowledge of the different presentations of common and less common neurological diseases.	SCE, mini-CEX, CbD	1,2,3,4
Understanding of the roles and usefulness of investigations including neuroimaging and neurophysiology.	SCE, mini-CEX, CbD	1,2,3,4
Skills		
Able to formulate an appropriately ordered differential diagnosis based on an appreciation of the patient, their past history and current problems and their likely causes. Consideration given for different racial, social & ethnic groups.	mini-CEX, CbD	1,2,3,4
Able to formulate a focussed and relevant series of investigations.	mini-CEX, CbD	1,2,3,4
Adopt assessments and interventions that are inclusive, respectful of diversity and patient-centred.	mini-CEX, CbD	
Behaviours		
Able to plan and order appropriate observations, liaise with members of the MDT, determine and prescribe immediate treatment, seek appropriate opinions and interventions and with others, develop an overall plan for the individual patient.	MSF	1,2,3,4
Demonstrate leadership skills including mentorship of junior medical colleagues.	MSF	1,2,3,4

1.5 Personal qualities

Identify own strengths, limitations and the impact of their behaviour and is able to change their behaviour in light of feedback and reflection

Knowledge	Assessment Methods	GMP
Demonstrates different methods of obtaining feedback.		1
Awareness of the trainee's own values and principles and how these may differ from those of other individuals and groups.	MSF, CbD	1,3,4
The importance of best practice transparency and consistency.		1
Skills		

Maintain and routinely practice critical self awareness, including being able to discuss strengths and weaknesses with supervisor and recognising external influences and changing behaviour accordingly.		1
Use assessment, appraisal, complaints and other feedback to discuss and develop an understanding of own development needs.		1.3
Identify own strengths and weaknesses.	MSF	1,3
Organise and manage workload effectively and flexibly.		1, 3
Behaviours		
Recognising and showing respect for diversity and differences in others.		1
Shows commitment to continuing professional development which involves seeking training and self development opportunities, learning from colleagues and accepting criticism.		1,3
Demonstrate self management: organising and managing themselves while taking account of the needs and priorities of others.	CbD, PS	3

1.6 Working with others

Adopt a team approach, acknowledging and appreciating efforts, contributions and compromises. Continue to recognise the common purpose of the team and respect their decisions

Knowledge	Assessment Methods	GMP
Demonstrates a wide range of leadership styles and approaches and the applicability to different situations and people.		1
Knowledge of the roles and importance of different members of the MDT.	MSF	1,2,3,4
Skills		
Enable individuals, groups and agencies to implement plans and make decisions.		1,3
Assessment and appraisal of more junior clinical colleagues or students.		1, 3
Build and maintain relationships by listening, supporting others, gaining trust and showing understanding.	MSF	3
Shown willingness to act as a leader, mentor, educator and role model.	MSF	3
Able to liaise with, refer to and communicate with all members of the MDT in a constructive and professional manner in the interests of the patient and their carers.	MSF	1,2,3,4
Able to liaise with and understand the role of specialist nurses.	MSF	1,2,3,4
Behaviours		
Showing recognition of a team approach, respecting colleagues, including non-medical professionals.		1,3
Able to contribute to or lead a MDT meeting.	MSF	1,2,3,4
Respect diversity of status and values in patients and colleagues.	MSF, PS	1,3

1.7 Managing Services

Support team members to develop their roles and responsibilities and continue to review performance of the team members to ensure that planned service outcomes are met		
Knowledge	**Assessment Methods**	**GMP**
Demonstrate knowledge of relevant legislation and HR policies.		1
Show knowledge of the duties, rights and responsibilities of an employer and co-worker.		1
Demonstrates knowledge of individual performance review.		1
Understand the roles, competences and capabilities of other professionals and support workers.		1,3,4
Understand the role of audit (improving patient care and services, risk management etc).		1
Understand the steps involved in completing the audit cycle.		1
Skills		
Continue to contribute towards staff development and training, including mentoring, supervision and appraisal.		1,3
Able to write a job description, including person specification and short listing criteria.		1
Contribute to the development of an organisational response to emerging health policy.		1
Behaviours		
Commitment to good communication whilst also inspiring confidence and trust.		1,3
Manage resources: know what resources are available and use influence to ensure that resources are used efficiently and safely.		1
Manage people: providing direction, reviewing performance and motivating others.		1,3
Manage performance: hold oneself and others accountable for service outcomes.		1,3

1.8 Improving Services

Ensure patient safety at all times, continue to encourage innovation and facilitate transformation		
Knowledge	**Assessment Methods**	**GMP**
Demonstrate knowledge of risk management issues and risk management tools.		1,2
Demonstrates understanding of how healthcare governance influences patient care.		1
Demonstrates knowledge of a variety of methodologies for developing creative solutions to improving services.		1,2
Recall principles of risk assessment and management.		1,2
Identify risk management guidance e.g. safe prescribing, sharps disposal, needlestick injury.		1,2
Skills		

Reports clinical incidents.	1,2
Be able to assess and manage risk to patients.	2
Monitors the quality of equipment and safety of the environment relevant to the specialty.	1,2
Ensure the correct and safe use of medical equipment, ensuring faulty equipment is reported appropriately.	2
Questions existing practice in order to improve the services.	1,2
Behaviours	
Seeks advice and or assistance whenever concerned about patient safety.	1,2,3
Supports colleagues to voice new ideas and is open minded to new thoughts.	1,3

1.9 Setting Direction

Is able to identify the contexts for change and is able to make decisions		
Knowledge	**Assessment Methods**	**GMP**
Demonstrates knowledge of the functions and responsibilities of national bodies, College and faculties, representatives, regulatory bodies.		1
Demonstrates effective communication strategies within organisations.		1
Skills		
The ability to discuss the local, national and UK health priorities and how they impact on the delivery of health care relevant to the specialty.		1
Is able to run committee meetings and work collegiately and collaboratively with a wide range of people outside the immediate clinical setting.		1,3
Behaviours		
Willingness to articulate strategic ideas and use effective influencing skills.		1,3
Willingness to participate in decision making processes beyond the immediate clinical care setting.		1,3
Apply knowledge and evidence: gathering information to produce an evidence-based challenge to systems and processes in order to identify opportunities for service improvements.		1
Make decisions: integrating values with evidence to inform decisions.		1, 3

1.10 Clinical Pharmacology of Neurological Disorders

Knowledge	Assessment Methods	GMP
Principles of neuro-pharmacokinetics and pharmacodynamics.	SCE, CbD	1,2,3,4
Understand principles of treatment especially vascular disease, migraine, epilepsy, pain, psychiatric disorders, movement disorders, multiple sclerosis, autoimmune disorders, infections, dementia, motor neuron disease.	SCE, CbD	1,2,3,4
Understand limitations: compliance, adverse effects, interactions, cost implications.	SCE, CbD	1,2,3,4
Skills		
Able to plan and administer pharmacological treatments safely and effectively.	mini-CEX, CbD **(R)**	1,2,3,4
Able to refer to local and national guidelines (NICE) and sources of evidence and information about treatments.	mini-CEX, CbD **(R)**	1,2,3,4
Understand information needs of patients and others.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Utilise reporting mechanisms for adverse events, both within an organisation and to national bodies.	CbD	1,2,3,4

1.11 Presentation Skills, Audit and Quality Improvement

Knowledge	Assessment Methods	GMP
An understanding of the importance and processes of audit.	AA, QIPAT	1,2,3
Understands the differences between audit and quality improvement	AA, QIPAT, CbD	1
Understands steps involved in completing a quality improvement project (which may include audit)	AA, QIPAT, CbD	1
Skills		
Ability to give a range of oral presentations with the use of appropriate audio-visual aids including *Powerpoint* presentations. Presentations may involve clinical cases, audits or research papers.	TO, QIPAT	1,3
Ability to instigate and collate an audit project.	AA, QIPAT	1,2,3
Ability to answer questions from members of the audience.	TO, QIPAT	
Describes measurement for improvement	AA, QIPAT, CbD	1,2
Demonstrates the learning from the experience	AA, QIPAT, CbD	1,2
Behaviours		
Ability to adjust level of presentation dependent upon the anticipated audience.	TO, QIPAT	1,3
Recognises and commits to the culture of continuous improvement in clinical practice to promote safe and high quality care	AA, QIPAT, CbD	1, 2
Ability to reflect upon changes in patient management as the result of a completed audit project.	AA, QIPAT	1,2,3

Recognise how health systems can discriminate against patients from diverse backgrounds, and how to work to minimise this discrimination. For example, in respect of age, gender, race, culture, disability, spirituality, religion and sexuality

1.12 Special Interest Groups: Women & Pregnancy

Knowledge	Assessment Methods	GMP
Understand the effects of menarche, menstrual cycle and menopause on common neurological disorders.	SCE, CbD	1,2
Knowledge of methods of contraception, failure rate and interaction with drugs (especially antiepileptic drugs); teratogenic risks of commonly prescribed drugs (especially AEDs) and genetic risks of neurological diseases; presymptomatic/prenatal diagnosis of neurological conditions; psychosexual dysfunction in neurological illness (especially epilepsy).	SCE, CbD	1,2
Understand the effect of pregnancy on existing neurological disorders and neurological disorders as complications of pregnancy.	SCE, CbD	1,2
Knowledge of the neonatal complications in offspring of affected women with neurological conditions; effects of drugs on pregnancy (foetus and mother) and pregnancy on drugs.	SCE, CbD	1,2
Skills		
Ability to evaluate, diagnose and manage women with neurological disease.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Adherence to national guidelines (e.g. NICE guidelines for epilepsy, British National Formulary etc.	MSF	1,2,3,4
Ability to interface with obstetricians.	MSF	1,2,3,4

1.13 Special Interest Groups: Teenagers

Knowledge	Assessment Methods	GMP
Knowledge of neurological disorders presenting in adolescence.	SCE, CbD	1,2
Knowledge of childhood neurological disorders presenting in early adulthood.	SCE, CbD	1,2
(see neuropaediatric section)		
Skills		
Understand the special needs of teenagers, particular issues of confidentiality, and transition disorders.	mini-CEX, CbD **(R)**	1,2,3,4
Ability to evaluate, diagnose and manage teenagers with neurological disease.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Ability to interface with paediatricians in the handover of patients from paediatric to adult neurological practice.	MSF	1,2,3,4

1.14 Special Interest Groups: Elderly

Knowledge	Assessment Methods	GMP
Understand the normal clinical and radiological findings in the elderly; special presentations of neurological disease in the elderly; diagnosis, investigation and management of dementia; effects of drugs in the elderly; hospital based & community services; communication with relatives and care agencies; role of departments of medicine for the elderly.	SCE, CbD	1,2
Skills		
Understand the specific issues of the Mental Capacity Act in relation to this patient group.	mini-CEX, CbD **(R)**	1,2,3,4
Ability to evaluate, diagnose and manage the elderly with neurological disease.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Ability to interface with geriatricians and care agencies dealing with the elderly population.	MSF	1,2,3,4

1.15 Special Interest Groups: Learning Disabilities

Knowledge	Assessment Methods	GMP
Understanding of the common causes of learning disabilities and the different presentation of symptoms in this group.	SCE, CbD	1,2
(see neuropaediatric section)		
Recognise the stigmatising effects of some illnesses and work to help in overcoming stigma.	mini-CEX, CbD	1,2,3,4
Skills		
Understand the needs of patients with special educational needs with neurological disorders. Understand the specific issues of the Mental Capacity Act in relation to this patient group.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Ability to interface with fellow professionals and care agencies dealing with patients with learning disabilities.	MSF	1,2,3,4

1.16 Special Interest Groups: Terminally Ill

Knowledge	Assessment Methods	GMP
Understand end of life issues in neurological disorders and the role of palliative care services and specialist nurses; ethical and legal aspects of terminal care.	SCE, CbD	1,2
Skills		
Ability to communicate end of life issues including the withdrawal of treatment and organ donation with patients and relatives.	mini-CEX, CbD **(R)**	1,2,3,4
Ability to discuss Advanced Directives to Refuse Treatment (ADRT) with patients and relatives	mini-CEX, CbD	1,2,3,4
Behaviours		

Ability to interface with fellow professionals and care agencies dealing with patients with end of life issues.	MSF	1,2,3,4

2. Major Topics within Neurology Curriculum

2.1 Head Injury

Knowledge	Assessment Methods	GMP
Knowledge of symptoms and signs of head injury and its complications; indications for investigations; indications for medical interventions, ITU referral, urgent and delayed neurosurgery.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with acute head injury: perform immediate resuscitative measures; formulate a strategy for immediate and short term management; primary and secondary effects of head injury.	mini-CEX, CbD **(R)**	1,2,3,4
Ability to evaluate and manage post traumatic change in consciousness, behaviour and cognition, and other post-traumatic symptoms (including epilepsy).	mini-CEX, CbD **(R)**	1,2,3,4
Ability to interface with neurosurgeons and ITU staff.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.2 Headache

Knowledge	Assessment Methods	GMP
Knowledge of the clinical features, differential diagnosis and specific pharmacological and general treatment of the causes of headache and facial pain.	SCE, CbD	1,2
An understanding of the role of relevant investigations: brain scanning, urgent blood tests, lumbar puncture.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with headache & facial pains.	mini-CEX, CbD **(M)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.3 Disorders of Consciousness

Knowledge	Assessment Methods	GMP
Knowledge of anatomy and physiology of consciousness, and the pathophysiology of disorders of consciousness; definitions, causes, pathophysiology, clinical features and prognosis of permanent vegetative state, locked in state and brainstem death.	SCE, CbD	1,2
An understanding of the legal issues relating to disorders of consciousness.	SCE, CbD	1,2
Skills		
Ability to assess the unresponsive patient and to formulate plan of investigation and management.	mini-CEX, CbD **(M)**	1,2,3,4

Use of tests for brainstem death.	mini-CEX, CbD **(M)**	1,2,3,4
Development of interpersonal skills for relating to management of the family of people with disorders of consciousness.	mini-CEX, CbD **(M)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.4 Disorders of Sleep

Knowledge	Assessment Methods	GMP
Knowledge of narcolepsy, daytime hypersomnolence, parasomnias, obstructive sleep apnoea, effects of neurological conditions on sleep; indications, scope and limitations of the sleep laboratory; principles of physical and pharmacological treatment.	SCE, CbD	1,2
An understanding of the effects of sleep on the EEG.	SCE, CbD	1,2
Knowledge of driving regulations and the consequences and complications of sleep disorders.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with sleep disorders.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.5 Disorders of Higher Function & Behaviour

Knowledge	Assessment Methods	GMP
An understanding of memory, language, visuospatial function & behaviour; definition and epidemiology of dementia; pathology and clinical features of individual dementias; relevant investigations, specific treatments, genetic aspects, risks and costs of investigations; role of neuropsychological evaluation (inc. dementia and mood scales).	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with disordered higher function & behaviour.	mini-CEX, CbD **(R)**	1,2,3,4
Evaluation of competency (e.g. Mental Capacity Act, enduring power of attorney).	mini-CEX, CbD **(R)**	1,2,3,4
Ability to work with community and support services.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.6 Epilepsy and Loss of Consciousness

Knowledge	Assessment Methods	GMP
Knowledge of the differential diagnosis of paroxysmal and transient events; scope and limitations of investigations; use of anti-epileptic drugs; treatment of refractory seizures; serial seizures and status epilepticus; role of epilepsy surgery.	SCE, CbD	1,2
Awareness of issues related to women and pregnancy, driving, vocation and sudden death; psychological and social consequences of epilepsy especially teenagers.	SCE, CbD	1,2
Knowledge and management of other causes of loss of consciousness including syncope, drop attacks and vaso-vagal episodes.	SCE, CbD	1,2
Knowledge, recognition and management of non-epileptic seizures.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with epilepsy.	mini-CEX, CbD **(M)**	1,2,3,4
Recognise that people can be denied employment opportunities unnecessarily through myths, stigma, dogma and insufficient advocacy and support; be aware of the role of doctors and other services in combating this inequality.	mini-CEX, CbD	1,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.7 Cerebrovascular Disease

Knowledge	Assessment Methods	GMP
Knowledge of the cerebral circulation and its determinants; pathophysiology of cerebral infarction, cerebral haemorrhage, subarachnoid haemorrhage, cerebral venous thrombosis and vascular dementia.	SCE, CbD	1,2
Knowledge of the epidemiology, risk factors and their management; features of stroke /TIA, intracranial haemorrhage and venous thrombosis; investigation and management of acute stroke (including thrombolysis) and TIA as medical emergencies; the role of medical secondary prevention and surgical interventions (e.g. hemicraniectomy, endartectomy).	SCE, CbD	1,2
An understanding of the role and limitation of imaging (e.g. CTA, DWI); role of evaluation scales.	SCE, CbD	1,2
Cerebral aneurysm and AVM; interventional, surgical and radiotherapy treatment.	SCE, CbD	1,2
Multidisciplinary stroke care, organisation of stroke units, nutrition after stroke, rehabilitation techniques, community stroke care.	SCE, CbD	1,2
Skills		
Ability to work competently within a stroke MDT and on-call setting.	MSF	1,2,3,4
Ability to evaluate and manage people with stroke disease	CbD, mini-CEX **(M)**	1,2,3,4
Ability to assess suitability and safely administer intravenous thrombolysis for patients with acute ischaemic stroke	CbD, mini-CEX	1,2,3,4

Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.8 Tumours of the NS, Neurological Complications of Systemic Cancer, Complications of Treatment of Cancer

Knowledge	Assessment Methods	GMP
Neuropathological classification of brain tumours; clinical features of the common tumours of the nervous system including malignant meningitis.	SCE, CbD	1,2
Clinical features and immunology of paraneoplastic syndromes; benefits and risks of therapies including surgery and radiotherapy; neurological complications of chemotherapy and radiotherapy.	SCE, CbD	1,2
Understanding the role of the neuro-oncology MDT.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with primary tumours of the NS or effects of systemic tumours or their treatment.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.9 Infections of Nervous System

Knowledge	Assessment Methods	GMP
Principles of neurological infectious disease; clinical features of these diseases and their causes (including meningitis, encephalitis, TB, HIV, neurosyphilis).	SCE, CbD	1,2
Diagnostic techniques and their appropriate use; anti-microbial therapies and their use; the importance of liaison with infectious disease physicians, microbiologists, public health and occupational health medicine in relation to neurological infections.	SCE, CbD	1,2
Knowledge of prion disorders and its wider implications, such as infection control risk.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with infections of NS. Demonstrate appropriate history and communication skills (i.e. sexual and travel history, or need for HIV testing) in a patient with suspected NS infection.	mini-CEX, CbD **(R)**	1,2,3,4
Based on an understanding of risk, be able to apply epidemiological principles and public health approaches so as to reduce and prevent disease and improve the health of populations.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.10 CSF Disorders

Knowledge	Assessment Methods	GMP
CSF composition and dynamics; anatomy and radiology of the ventricular system; genesis of hydrocephalus; biochemistry and immunology of CSF; blood brain barrier; indications, techniques, and contraindications of CSF examination.	SCE, CbD	1,2
Methods of intracranial pressure monitoring; treatments of raised intracranial pressure, management of shunts.	SCE, CbD	1,2
Skills		
Able to evaluate and manage people with disorders of CSF including diagnostic and therapeutic lumbar punctures.	mini-CEX, CbD **(R)** DOPS **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.11 Demyelination & Vasculitis

Knowledge	Assessment Methods	GMP
Biology of demyelination & vasculitis; clinical features of multiple sclerosis, related demyelinating disorders and vasculitic and arteritic disorders.	SCE, CbD	1,2
Management of specific impairments and disabilities arising in MS; role of disease modifying drugs, symptomatic treatments and therapies.	SCE, CbD	1,2
Use of disability rating scales.	SCE, CbD	1,2
Skills		
Ability to evaluate & manage people with demyelinating & vasculitic disorders.	mini-CEX, CbD **(M)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.12 The Neurological Complications of Immunosuppression

Knowledge	Assessment Methods	GMP
Principles of immune responses in relation to the NS; immunological basis underlying auto-immune neurological disease; clinical features of these diseases; diagnostic techniques and their appropriate use.	SCE, CbD	1,2
Immunosuppressive and immunomodulatory therapies; their actions, side effects and indications.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with immunological disorders caused by disease or treatment.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content	MSF	1,2,3,4

competencies.

2.13 Parkinsonism & Movement Disorders

Knowledge	Assessment Methods	GMP
Clinical features and differential diagnosis of parkinsonism, chorea/athetosis, dystonia, tics and tremor; role of investigations in diagnosis (including DAT scans).	SCE, CbD	1,2
Treatment (and complications of treatment) of movement disorders; role of neurosurgical interventions.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with Parkinsonism and Movement Disorders.	mini-CEX, CbD **(M)**	1,2,3,4
Ability to liaise with other members of MDT (e.g. PD specialist nurse).	mini-CEX, CbD **(M)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.14 Motor Neuron Disease

Knowledge	Assessment Methods	GMP
Clinical features and differential diagnosis of motor neuron syndromes; disease modifying and symptomatic treatments (e.g. NIV).	SCE, CbD	1,2
Special issues of breaking bad news and prognosis; palliative care aspects; knowledge of advanced directives and living wills.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with motor neuron disease.	mini-CEX, CbD **(M)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.15 Toxic & Metabolic States

Knowledge	Assessment Methods	GMP
Biochemistry and neuropathology of exposure to alcohol and other recreational drugs (cocaine, amphetamine, opiates), heavy metals, pesticides and therapeutic agents; clinical features of alcohol, cocaine, opiate, amphetamine neurotoxicity; of heavy metal, CO, NO and organophosphate poisoning; of therapeutic agent neurotoxicity (e.g. vincristine, lithium, radiation).	SCE, CbD	1,2
Psychiatric morbidity associated with substance abuse.	SCE, CbD	1,2
Neurological presentations of renal & hepatic failure, nutritional deficiencies and porphyria.	SCE, CbD	1,2
Role and value of blood and urine toxicology, imaging and neurophysiology; assessment of other organ damage; clinical features and management of hyper/hypo-thermia, sodium, potassium, calcium and acid base disorders.	SCE, CbD	1,2

Skills		
Ability to evaluate and manage people with metabolic/toxic states.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.16 Disorders of the Visual System

Knowledge	Assessment Methods	GMP
Applied anatomy and physiology of the visual and oculomotor systems; clinical evaluation of the eye and adnexae, vision (acuity, fields and higher function); clinical features and conditions which may affect these systems.	SCE, CbD	1,2
Driving regulations.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with disorders of the visual system including visual failure, oculomotor disorders & pituitary disease.	mini-CEX, CbD **(M)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.17 Disorders of Cranial Nerves

Knowledge	Assessment Methods	GMP
Anatomy of the skull base, particularly the orbit, cavernous sinus, pituitary fossa, foramen magnum and jugular foramen; pathological processes involving cranial nerves and their central connections; clinical features & clinical assessment of cranial nerve function.	SCE, CbD	1,2
Management of cranial nerve disorders including multidisciplinary approaches to visual, hearing & balance, speech & swallowing disorders.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with disorders of cranial nerve function.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.18 Disorders of Spine, Spinal Cord, Roots and Spinal Injury

Knowledge	Assessment Methods	GMP
Anatomy of the spine, spinal cord, roots; clinical features of spinal cord, root and cauda equina syndromes; indications for urgent investigation; potential and limitations of spinal CT, MRI, myelography and spinal angiography.	SCE, CbD	1,2
Emergency management of spinal cord or root compression, of spinal injury; management of neck and low back pain and sciatica.	SCE, CbD	1,2

Skills		
Ability to evaluate and manage people with disorders of the spine, spinal cord and roots, and the acute & chronic consequences of acute spinal cord injury including effects of paralysis, autonomic dysfunction and sensory loss.	mini-CEX, CbD **(M)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.19 Disorders of Peripheral Nerve

Knowledge	Assessment Methods	GMP
Anatomy and pathology of peripheral nerves; clinical features & investigation of genetic and acquired axonal and demyelinating neuropathies, traumatic & entrapment neuropathies, plexopathies and mononeuritis multiplex; management of Guillain-Barré syndrome and other severe paralysing neuropathies; general management of acute neuromuscular paralysis.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with disorders of peripheral nerves (including plexus lesions).	mini-CEX, CbD **(M)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.20 Disorders of Autonomic Nervous System

Knowledge	Assessment Methods	GMP
Anatomy and physiology of ANS; clinical features of ANS disorders alone and as part of other condition e.g. multi-system atrophy; investigations including autonomic function tests.	SCE, CbD	1,2
Pharmacological and physical managements of urinary retention, erectile disorder, constipation, postural hypotension, autonomic dysreflexia.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with disorders of the autonomic nervous system.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.21 Disorders of Muscle

Knowledge	Assessment Methods	GMP
Clinical features and investigation of genetic and acquired disorders of the neuromuscular junction and voluntary muscle including periodic disorders and disorders of energy metabolism (e.g. mitochondrial disorders).	SCE, CbD	1,2
Management including cardio-respiratory and anaesthetic considerations.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with disorders of muscle.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

2.22 Pain

Knowledge	Assessment Methods	GMP
Theories of pain generation; pain patterns in neurological and systemic diseases; effective use of pharmacological agents and other measures for pain relief including nerve blocks, TNS, acupuncture and neurosurgical interventions.	SCE, CbD	1,2
Role of Pain Clinic; psychological and social effects of chronic pain, understanding of MDT approach.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage people with neurological disorders causing pain and common non neurological causes of pain including musculoskeletal disease.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

3. Allied Topics within Neurology Curriculum

3.1 Clinical Neurophysiology

Knowledge	Assessment Methods	GMP
EEG - normal range of EEG findings; common epileptiform abnormalities; capabilities and limitations in neurological disorders; role of monitoring techniques (telemetry, ambulatory); evaluation of sleep disorders; neurological emergencies.	SCE, CbD	1,2
EMG/NCS/repetitive stimulation – principles of techniques; abnormalities in common nerve entrapments, peripheral neuropathies; motor neuron disease; disorders of neuromuscular junction; muscle disease.	SCE, CbD	1,2
Evoked potentials **-** common abnormalities in neurological diseases, particularly demyelination; role of intraoperative EP.	SCE, CbD	1,2
Skills		
Understand role and practice of neurophysiological investigations in disorders of the nervous system; ability to interpret a neurophysiology report. *(see sections on epilepsy, sleep disorders, peripheral nerve and muscle).*	mini-CEX, CbD **(M)**	1,2,3,4
Ability to interface with neurophysiology colleagues.	mini-CEX, CbD **(M)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

3.2 Neuroendocrinology

Knowledge	Assessment Methods	GMP
Clinical features and investigations in endocrine disorders; emergency management of disorders; relationships with neurological disorders.	SCE, CbD	1,2
Steroid therapy and its complications.	SCE, CbD	1,2
Skills		
Understand the principles of the NS in endocrine function and neurological features of endocrine disorder particularly pituitary disease.	mini-CEX, CbD **(R)**	1,2,3,4
Ability to interface with endocrinological colleagues.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

3.3 Neurogenetics

Knowledge	Assessment Methods	GMP
Basic genetic principles including inheritance patterns and common diagnostic methods; roles of a detailed family history and of DNA based diagnostic tests.	SCE, CbD	1,2
Genetic contribution to multifactorial neurological disease (e.g. stroke, multiple sclerosis, subarachnoid haemorrhage, epilepsy).	SCE, CbD	1,2
Clinical features of common genetic conditions (hereditary ataxias, Huntington's disease, hereditary neuropathies, muscle diseases, and neurocutaneous syndromes).	SCE, CbD	1,2
An understanding of the role of bioinformatic databases of human disease.	SCE, CbD	1,2
Skills		
Understand the principles of genetics as applied to neurological disorder; ability to interpret a genetics report.	mini-CEX, CbD **(M)**	1,2,3,4
Ability to counsel and consent patients and families prior to undergoing genetic testing.	mini-CEX, CbD **(M)**	1,2,3,4
Ability to interface with genetic colleagues.	mini-CEX, CbD **(M)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

3.4 Neurointensive Care

Knowledge	Assessment Methods	GMP
Clinical features, causes, investigation and management of coma (including epilepsy and raised intracranial pressure), failure to regain consciousness and paralysis; diagnosis of and ability to define the vegetative state; management of status epilepticus; the principles of cardiovascular and respiratory support; indications for and methods of artificial nutrition. *(see sections on epilepsy, head injury & disorders of consciousness).*	SCE, CbD	1,2
ICU neurological complications of major surgery, sepsis, drugs & medical disorders.	SCE, CbD	1,2
Clinical, legal and ethical issues in brain death, coma and vegetative state.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage (with others) people in ICU.	mini-CEX, CbD **(M)**	1,2,3,4
Ability to interface and communicate with patients, relatives and staff in ICU.	mini-CEX, CbD **(M)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

3.5 Neuro-otology

Knowledge	Assessment Methods	GMP
Applied anatomy and physiology of hearing and balance; history and examination techniques including vestibular manoeuvres; conditions affecting the vestibulocochlear system.	SCE, CbD	1,2
Skills		
Ability to evaluate the deaf and / or dizzy person and interpret reports including audiograms.	mini-CEX, CbD **(R)**	1,2,3,4
Ability to perform diagnostic and therapeutic vestibular manoeuvres.	mini-CEX, CbD **(R)**	
Ability to interface with ENT and audiological colleagues.	mini-CEX, CbD **(R)**	
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

3.6 Neuropaediatrics

Knowledge	Assessment Methods	GMP
Understanding of neurological disorders in intrauterine life and childhood; key stages of development and range of normality; knowledge of developmental disorders (including effects of intrauterine and perinatal factors on neural development), metabolic conditions, cerebral palsy, learning disability and autism.	SCE, CbD	1,2
Knowledge of paediatric conditions that can present in adulthood.	SCE, CbD	1,2
Skills		
Ability to evaluate and manage neurological disorders in teenagers in liaison with paediatric neurologists.	mini-CEX, CbD **(R)**	1,2,3,4
Ability to examine teenage children.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

3.7 Neuropathology

Knowledge	Assessment Methods	GMP
Understand the pathological and biochemical basis of neurological disorders; anatomy of brain sections, brain preparation, histological, histochemical, immunocytochemical and E.M. techniques; biochemical, immunological & microbiological techniques; understand and interpret reports issued; role of and consent process for necropsy examination: role of a coroner.	SCE, CbD	1,2
Skills		
Ability to appropriately request pathological investigations and interpret pathology reports.	mini-CEX, CbD **(R)**	1,2,3,4
Understand the importance of clinico-pathological conferences.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content	MSF	1,2,3,4

competencies.

3.8 Neuropsychiatry

Knowledge	Assessment Methods	GMP
Understanding of common psychiatric disorders (including learning disability), neurological features which may have psychiatric causes (including medically unexplained symptoms, conversion disorder, somatisation); the mental health act and when it can be used.	SCE, CbD	1,2
Skills		
Ability to evaluate and interpret psychiatric symptoms in and as presentations of neurological disorders, psychiatric consequences of neurological disease and neurological features in people with psychiatric disorders. Ability to evaluate and manage acute organic brain syndromes.	mini-CEX, CbD **(R)**	1,2,3,4
Ability to liaise effectively and appropriately with psychiatry services.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

3.9 Neuropsychology

Knowledge	Assessment Methods	GMP
Understanding of neuroanatomical and neurophysiological basis of memory, attention, language and perception; understand the value and limitations of neuropsychological interventions such as Cognitive Behavioural Therapy; understand mini-mental state examination and basic neuropsychological tests employed by Clinical Psychologists, e.g. NART, WAIS.	SCE, CbD	1,2
Skills		
Ability to utilise basic clinical tests of cognitive function, to understand the need to refer to and the role of the Clinical Neuropsychologist, and to interpret reports.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

3.10 Neuroradiology

Knowledge	Assessment Methods	GMP
Request, interpret and utilise neuro-radiological investigations appropriately; explain the nature, risks and benefits of neuro-radiological investigations (CT scan cranial/angiography, MR scan cranial/spinal/angiography, catheter angiography diagnostic/interventional, myelography, ultrasound carotid/trans-cranial/cardiac, other special investigations e.g. PET, SPECT) to patients.	SCE, CbD	1,2
Skills		
Ability to request and evaluate neuroradiological investigations and reports; liaise effectively with the neuroradiologist; understand the	mini-CEX, CbD **(M)**	1,2,3,4

role, risks and limitations of common techniques.		
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

3.11 Neurorehabilitation

Knowledge	Assessment Methods	GMP
Understand the difference between pathology, impairment, activity & participation; understand the potential and limitations of neurorehabilitation; understand the social perspective, relevant social work legislation and availability of care in the community.	SCE, CbD	1,2
Skills		
Ability to evaluate the requirement for rehabilitation in people with neurological disorders (including stroke, head injury, spinal injury and MS) in the context of a multidisciplinary team and make appropriate referrals. Ability to perform and utilise a functional assessment.	mini-CEX, CbD **(M)**	1,2,3,4
Contribute to and, if appropriate, lead an MDT meeting being aware of the different roles, skills, approach and agenda of rehabilitation teams.	mini-CEX, CbD **(M)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

3.12 Neurosurgery

Knowledge	Assessment Methods	GMP
Understand the role of neurosurgery in the management of head injury, raised intracranial pressure, intracranial haemorrhage and ischaemic stroke, aneurysm, vascular malformation and tumours, spinal cord and root disorder and peripheral nerve lesions.	SCE, CbD	1,2
Understand the purpose, limitations, process and complications of biopsy procedures (brain, muscle, nerve).	SCE, CbD	1,2
Understanding of the principles of general and specific risks and complications of neurosurgical interventions.	SCE, CbD	1,2
Skills		
Ability to evaluate the requirement for neurosurgical interventions in people with neurological disorders and to liaise effectively with the neurosurgeon.	mini-CEX, CbD **(M)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

3.13 Neurourology

Knowledge	Assessment Methods	GMP
Understand normal control of micturition and sexual function; differential diagnosis of causes of disordered micturition and erectile dysfunction; understand hypo- and hyper-sexuality; understand	SCE, CbD	1,2

treatment strategies for disorders of micturition and sexual function.		
Skills		
Ability to evaluate, manage and or refer people with disordered micturition and sexual function due to neurological disorder.	mini-CEX, CbD **(R)**	1,2,3,4
Ability to refer appropriately to Urology, Genitourinary Medicine or Uroneurologist.	mini-CEX, CbD **(R)**	1,2,3,4
Behaviours		
Demonstration of relevant general and professional content competencies.	MSF	1,2,3,4

4 Learning and Teaching

4.1 The Training Programme

The organisation and delivery of postgraduate training is the statutory responsibility of the General Medical Council (GMC) which devolves responsibility for the local organisation and delivery of training to the deaneries. Each deanery oversees a "School of Medicine" which is comprised of the regional Specialty Training Committees (STCs) in each medical specialty. Responsibility for the organisation and delivery of specialty training in neurology in each deanery is, therefore, the remit of the regional neurology STC. Each STC has a Training Programme Director who coordinates the training programme in the specialty.

Clinical placements will usually be for between 3 and 12 months as directed by the STC Chair/TPD and all trainees will spend time in a minimum of two neurological training sites. At least one site must include the allied specialties of neurosurgery, neuroradiology, neurophysiology, neuropsychology and neuropathology.

All trainees should have exposure to a 'DGH type' setting for the minimum of a 12 month period or equivalent total time period. This setting may vary between different training programmes, but for the purpose of this document is defined as a training site with unselected neurological exposure and training opportunities.

All trainees will have the option of Out Of Programme Experience (OOPE) appropriate to their training needs and aspirations. This may include time spent in research or experience in other deaneries or overseas and will be determined following discussions between the trainee, their educational supervisor and STC Chair/TPD. Prospective approval should be sought from GMC/JRCPTB to determine if time spent, and experience gained, during an OOPE can be counted towards the attainment of a CCT in neurology.

The sequence of training should ensure appropriate progression in experience and responsibility. The training to be provided at each training site is defined to ensure that, during the programme, the entire curriculum is covered and also that unnecessary duplication and educationally unrewarding experiences are avoided. However, the sequence of training should ideally be flexible enough to allow the trainee to develop a special interest.

Acting up as a consultant (AUC)

"Acting up" provides doctors in training coming towards the end of their training with the experience of navigating the transition from junior doctor to consultant while maintaining an element of supervision.

Although acting up often fulfills a genuine service requirement, it is not the same as being a locum consultant. Doctors in training acting up will be carrying out a consultant's tasks but with the understanding that they will have a named supervisor at the hosting hospital and that the designated supervisor will always be available for support, including out of hours or during on-call work. Doctors in training will need to follow the rules laid down by the Deanery / LETB within which they work and also follow the JRCPTB rules which can be found at www.jrcptb.org.uk/trainingandcert/Pages/Out-of-Programme.

4.2 Teaching and Learning Methods

The curriculum will be delivered through a variety of learning experiences. Trainees will learn from practice, clinical skills appropriate to their level of training and to their attachment within the department.

Trainees will achieve the competencies described in the curriculum through a variety of learning methods. There will be a balance of different modes of learning from formal teaching programmes to experiential learning 'on the job'. The proportion of time allocated to different learning methods may vary depending on the nature of the attachment within a rotation.

This section identifies the types of situations in which a trainee will learn.

Learning with Peers - There are many opportunities for trainees to learn with their peers. Local postgraduate teaching opportunities allow trainees of varied levels of experience to come together for small group sessions. Examination preparation encourages the formation of self-help groups and learning sets.

Trainees will be encouraged to create local forums for peer learning opportunities. These include trainee led journal clubs, discussion of cases and participation in regional or departmental grand round presentations

Work-based Experiential Learning - The content of work-based experiential learning is decided by the local faculty for education but includes active participation in:

- Medical clinics including specialty clinics. After initial induction, trainees will review patients in outpatient clinics, under direct supervision. The degree of responsibility taken by the trainee will increase as competency increases. As experience and clinical competence increase trainees will assess 'new' and 'review' patients and present their findings to their clinical supervisor. It is expected trainees will complete the equivalence of 2.5 out patient clinics per week (max 4 per week) throughout the full training programme. 2 of these per week will be general neurology clinics and the remainder will allow opportunities to attend sub-specialty clinics.
- Specialty-specific takes
- Post-take consultant ward-rounds
- Personal ward rounds and provision of ongoing clinical care on specialist medical ward attachments. Every patient seen, on the ward or in out-patients, provides a learning opportunity, which will be enhanced by following the patient through the course of their illness: the experience of the evolution of patients' problems over time is a critical part both of the diagnostic process as well as management. Patients seen should provide the basis for critical reading and reflection of clinical problems.
- Consultant-led ward rounds. Every time a trainee observes another doctor, consultant or fellow trainee, seeing a patient or their relatives there is an opportunity for learning. Ward rounds, including those post-take, should be led by a consultant and include feedback on clinical and decision-making skills. It is expected trainees attend a minimum of 2 consultant-led ward rounds per week throughout the majority of time in training.
- Multi-disciplinary team meetings. There are many situations where clinical problems are discussed with clinicians in other disciplines. These provide excellent opportunities for observation of clinical reasoning.
- Provision of a ward referral service for the in-patients of other hospital specialties. The complexity of these will vary enormously and close supervision from

consultants will ensure every training opportunity is realised. It is expected trainees keep a record of all ward referrals and on call emergency admissions seen within their portfolios.

Trainees have supervised responsibility for the care of in-patients for a minimum of 2 out of the 5 years training programme. This includes day-to-day review (i.e. providing continuity of care) of clinical conditions, note keeping, and the initial management of the acutely ill patient with referral to and liaison with clinical colleagues as necessary. The degree of responsibility taken by the trainee will increase as competency increases. There should be appropriate levels of clinical supervision throughout training with increasing clinical independence and responsibility as learning outcomes are achieved (see Section 6.1 Supervision and Feedback).

Formal Postgraduate Teaching – The content of these sessions are determined by the local faculty of medical education and will be based on the curriculum. There are many opportunities throughout the year for formal teaching in the local postgraduate teaching sessions and at regional, national and international meetings. Many of these are organised by the Royal Colleges of Physicians.

Suggested activities include:

- A programme of formal bleep-free regular teaching sessions to cohorts of trainees (e.g. a weekly core training hour of teaching within a Trust)
- Case presentations
- Journal clubs
- Research and audit projects
- Lectures and small group teaching
- Grand Rounds
- Clinical skills demonstrations and teaching
- Critical appraisal and evidence based medicine and journal clubs
- Joint specialty meetings
- Attendance at training programmes organised on a deanery or regional basis, which are designed to cover aspects of the training programme outlined in this curriculum.

The frequency, format and range of formal postgraduate teaching opportunities will vary between different training programmes and different clinical placements.

All trainees will be expected to attend the regional training days for neurology trainees. It is expected a register of attendance at these training will be collated for the STC Chair/TPD.

Independent Self-Directed Learning -Trainees will use this time in a variety of ways depending upon their stage of learning. Suggested activities include:

- Reading, including web-based material
- Maintenance of personal portfolio (self-assessment, reflective learning, personal development plan)
- Audit and research projects
- Reading journals
- Achieving personal learning goals beyond the essential, core curriculum

Formal Study Courses - Time to be made available for formal courses is encouraged, subject to local conditions of service. Examples include management courses and communication courses.

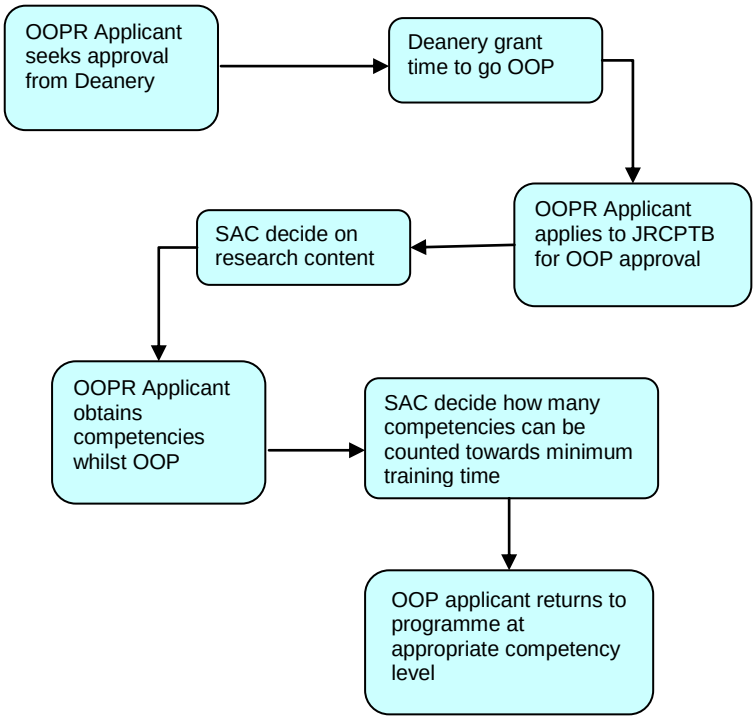
Trainees will also be encouraged to attend relevant national training courses covering the major topics within the curriculum utilising their study leave entitlements.

4.3 Research

Trainees who wish to acquire research competencies, in addition to those specified in their specialty curriculum, may undertake a research project as an ideal way of obtaining those competencies. For those in specialty training, one option to be considered is that of taking time out of programme to complete a specified project or research degree. Applications to research bodies, the deanery (via an OOPR form) and the JRCPTB (via a Research Application Form) are necessary steps, which are the responsibility of the trainee. The JRCPTB Research Application Form can be accessed via the JRCPTB website. It requires an estimate of the competencies that will be achieved and, once completed, it should be returned to JRCPTB together with a job description and an up to date CV. The JRCPTB will submit applications to the relevant SACs for review of the research content including an indicative assessment of the amount of clinical credit (competence acquisition) which might be achieved. This is likely to be influenced by the nature of the research (e.g. entirely laboratory-based or strong clinical commitment), as well as duration (e.g. 12 month Masters, 2-year MD, 3-Year PhD). On approval by the SAC, the JRCPTB will advise the trainee and the deanery of the decision. The deanery will make an application to the GMC for approval of the out of programme research. All applications for out of programme research must be prospectively approved.

Upon completion of the research period the competencies achieved will be agreed by the OOP Supervisor, Educational Supervisor and communicated to the SAC, accessing the facilities available on the JRCPTB ePortfolio. The competencies achieved will determine the trainee's position on return to programme; for example if an ST3 trainee obtains all ST4 competencies then 12 months will be recognised towards the minimum training time and the trainee will return to the programme at ST5. This would be corroborated by the subsequent ARCP.

This process is shown in the diagram below:



Funding will need to be identified for the duration of the research period. Trainees need not count research experience or its clinical component towards a CCT programme but must decide whether or not they wish it to be counted on application to the deanery and the JRCPTB.

A maximum period of 3 years out of programme is allowed and the SACs will recognise up to 12 months towards the minimum training times.

4.4 Academic Training

For those contemplating an academic career path, there are now well-defined posts at all levels in the Integrated Academic Training Pathway (IATP) involving the National Institute for Health Research (NIHR) and the Academy of Medical Sciences (AMS). For full details see http://www.nccrcd.nhs.uk/intetacatrain and http://www.academicmedicine.ac.uk/uploads/A-pocket-guide.pdf. Academic trainees may wish to focus on education or research and are united by the target of a consultant-level post in a university and/or teaching hospital, typically starting as a senior lecturer and aiming to progress to readership and professor. A postgraduate degree will usually be essential (see “out of programme experience”) and academic mentorship is advised (see section 6.1). Academic competencies have been defined by the JRCPTB in association with AMS and the Colleges and modes of assessment have been incorporated in the latest edition of the Gold Guide (section 7, see http://www.jrcptb.org.uk/forms/Documents/GoldGuide2009.pdf).

Academic integrated pathways to CCT are a) considered fulltime CCTs as the default position and b) are run through in nature. The academic programmes are CCT programmes and the indicative time academic trainees to achieve the CCT is the same as the time set for non-academic trainees. If a trainee fails to achieve all the required competencies within the notional time period for the programme, this would be considered at the ARCP, and recommendations to allow completion of clinical training would be made (assuming other progress to be satisfactory). An academic trainee working in an entirely laboratory-based project would be likely to require

additional clinical training, whereas a trainee whose project is strongly clinically oriented may complete within the “normal” time (see the guidelines for monitoring training and progress) http://www.academicmedicine.ac.uk/careersacademicmedicine.aspx. Extension of a CCT date will be in proportion depending upon the nature of the research and will ensure full capture of the specialty outcomes set down by the Royal College and approved by GMC.

All applications for research must be prospectively approved by the SAC and the regulator, see www.jrcptb.org.uk for details of the process.

5 Assessment

5.1 The Assessment System

The purpose of the assessment system is to:

- enhance learning by providing formative assessment, enabling trainees to receive immediate feedback, measure their own performance and identify areas for development;
- drive learning and enhance the training process by making it clear what is required of trainees and motivating them to ensure they receive suitable training and experience;
- provide robust, summative evidence that trainees are meeting the curriculum standards during the training programme;
- ensure trainees are acquiring competencies within the domains of Good Medical Practice*;*
- assess trainees’ actual performance in the workplace;
- ensure that trainees possess the essential underlying knowledge required for their specialty;
- inform the Annual Review of Competence Progression (ARCP), identifying any requirements for targeted or additional training where necessary and facilitating decisions regarding progression through the training programme;
- identify trainees who should be advised to consider changes of career direction.

The integrated assessment system comprises workplace-based assessments and knowledge – based assessments. Individual assessment methods are described in more detail below.

Workplace-based assessments will take place throughout the training programme to allow trainees to continually gather evidence of learning and to provide trainees with formative feedback. They are not individually summative but overall outcomes from a number of such assessments provide evidence for summative decision making. The number and range of these will ensure a reliable assessment of the training relevant to their stage of training and achieve coverage of the curriculum.

5.2 Assessment Blueprint

In the syllabus (3.3) the “Assessment Methods” shown are those that are appropriate as **possible** methods that could be used to assess each competency. It is not expected that all competencies will be assessed and that where they are assessed not every method will be used.

5.3 Assessment Methods

The following assessment methods are used in the integrated assessment system:

Examinations

The Federation of Royal Colleges of Physicians of the UK, in association with the Association of British Neurologists (ABN) has developed a Specialty Certificate Examination. The SCE in neurology is a summative assessment that is a prerequisite for attainment of the CCT.

The aim of this national assessment is to assess a trainee's knowledge and understanding of the clinical sciences relevant to specialist medical practice and of common or important disorders to a level appropriate for a newly appointed consultant.

Information about the SCE in neurology, including guidance for candidates, is available on the MRCP(UK) website www.mrcpuk.org

Workplace-based assessments

- Multi-Source Feedback (MSF)
- mini-Clinical Evaluation Exercise (mini-CEX)
- Direct Observation of Procedural Skills (DOPS)
- Case-Based Discussion (CbD)
- Patient Survey (PS)
- Quality Improvement Project Assessment Tool (QIPAT)
- Audit Assessment (AA)
- Teaching Observation (TO)

These methods are described briefly below. More information about these methods including guidance for trainees and assessors is available in the ePortfolio and on the JRCPTB website www.jrcptb.org.uk. Workplace-based assessments should be recorded in the trainee's ePortfolio. The workplace-based assessment methods include feedback opportunities as an integral part of the assessment process. This is explained in the guidance notes provided for the techniques.

Multisource Feedback (MSF)
This tool is a method of assessing generic skills such as communication, leadership, team working, reliability etc, across the domains of Good Medical Practice. This provides objective systematic collection and feedback of performance data on a trainee, derived from a number of colleagues. 'Raters' are individuals with whom the trainee works, and includes doctors, administration staff, and other allied professionals. The trainee will not see the individual responses by raters but feedback is given to the trainee by the Educational Supervisor.

All trainees will need to complete a minimum of two MSF assessments during the 5 years training programme as a mandatory requirement, but the STC Chair/TPD may stipulate additional MSF assessments for all or some trainees within a training programme. This decision will be made in response to educational supervisor reports or the decisions from an ARCP.

mini-Clinical Evaluation Exercise (mini-CEX)
This tool evaluates a clinical encounter with a patient to provide an indication of competence in skills essential for good clinical care such as history taking, examination and clinical reasoning. The trainee receives immediate feedback to aid

learning. The mini-CEX can be used at any time and in any setting when there is a trainee and patient interaction and an assessor is available.

All trainees must complete a minimum of 4 satisfactory mini-CEX assessments per year with a maximum of 2 per year per assessor as a mandatory requirement. The complexity of each mini-CEX should relate to the level of training and the breadth should cover the full curriculum over the 5 years training programme. These are highlighted as mandatory (M) or recommended (R) in the syllabus section 3.3.

Direct Observation of Procedural Skills (DOPS)
A DOPS is an assessment tool designed to assess the performance of a trainee in undertaking a practical procedure, against a structured checklist. The trainee receives immediate feedback to identify strengths and areas for development.

These assessments are not mandatory within the neurology curriculum although trainees may wish to incorporate lumbar puncture as a recommended DOPS. The complexity of the lumbar puncture procedure (for example therapeutic rather than diagnostic) should be greater than that achieved during CMT.

Case based Discussion (CbD)
The CbD assesses the performance of a trainee in their management of a patient to provide an indication of competence in areas such as clinical reasoning, decision-making and application of medical knowledge in relation to patient care. It also serves as a method to document conversations about, and presentations of, cases by trainees. The CbD should include discussion about a written record (such as written case notes, out-patient letter, discharge summary). A typical encounter might be when presenting newly referred patients in the out-patient department.

A minimum of 4 satisfactory assessments per year with the use of at least two assessors is a mandatory requirement. These should complement the mini-CEX assessments. The complexity of each CbD should relate to the level of training and the breadth should cover the full curriculum over the 5 years training programme. These are highlighted as mandatory (M) or recommended (R) in the syllabus section 3.3.

Patient Survey (PS)
Patient Survey address issues, including behaviour of the doctor and effectiveness of the consultation, which are important to patients. It is intended to assess the trainee's performance in areas such as interpersonal skills, communication skills and professionalism by concentrating solely on their performance during one consultation.

Audit Assessment Tool (AA)
The Audit Assessment Tool is designed to assess a trainee's competence in completing an audit. The Audit Assessment can be based on review of audit documentation or on a presentation of the audit at a meeting. If possible the trainee should be assessed on the same audit by more than one assessor.

All trainees are expected to complete 2 audit projects within the 5 years training programme. Trainees should show how they have instigated, collated and presented a piece of work, as well as reflected upon any changes in clinical management as a result of work completed. A Quality Improvement Project Assessment Tool (QIPAT) may be undertaken in place of 1 of the audit projects.

Quality Improvement Project Assessment Tool (QIPAT)
The Quality Improvement Project Assessment tool is designed to assess a trainee's competence in completing a quality improvement project. The Quality Improvement Project Assessment can be based on review of quality improvement project documentation OR on a presentation of the quality improvement project at a meeting. If possible the trainee should be assessed on the same quality improvement project by more than one assessor. A Quality Improvement Project Assessment Tool (QIPAT) may be undertaken in place of 1 of the audit projects.

Teaching Observation (TO)*****
The Teaching Observation form is designed to provide structured, formative feedback to trainees on their competence at teaching. The Teaching Observation can be based on any instance of formalised teaching by the trainee that has been observed by the assessor. The process should be trainee-led (identifying appropriate teaching sessions and assessors).

*Optional assessment method but strongly recommended

5.4 Decisions on Progress (ARCP)

The Annual Review of Competence Progression (ARCP) is the formal method by which a trainee's progression through her/his training programme is monitored and recorded. ARCP is not an assessment – it is the review of evidence of training and assessment. The ARCP process is described in A Reference Guide for Postgraduate Specialty Training in the UK (the "Gold Guide" – available from www.mmc.nhs.uk). Deaneries are responsible for organising and conducting ARCPs. The evidence to be reviewed by ARCP panels should be collected in the trainee's ePortfolio.

The ARCP Decision Aid is included in section 5.5, giving details of the evidence required of trainees for submission to the ARCP panels.

All trainees should receive a minimum of 3 months' notice of the date of the ARCP. The ARCP panel will include the STC Chair in neurology (or his/her nominated deputy), a minimum of 1 other neurology educational supervisor, as well as representatives from the deanery including lay membership.

All trainees will be expected to ensure that their ePortfolio is up-to-date with all the necessary evidence, as outlined below in the ARCP Decision Aid at least 2 weeks before the ARCP date.

Trainees are not expected to attend the ARCP meeting but will be notified of the panel's conclusions.

All trainees in OOPE will also undergo an ARCP and need a satisfactory report from their educational or research supervisor.

5.5 ARCP Decision Aid

(M) Mandatory, (R) Recommended

	ST 3	ST4 and ST5	ST6	ST7
Examinations (M)		Specialty Certificate Examination (SCE) attempted	SCE passed/attempted	Specialty Certificate Examination passed to achieve CCT
Multisource Feedback (M)	Satisfactory MSF		Satisfactory MSF	
mini-CEX (M)	Minimum 4 satisfactory spread across curriculum.	As ST3 with broadening curriculum coverage and complexity.	As ST3 with broadening curriculum coverage and complexity.	As ST3 with broadening curriculum coverage and complexity to include all mandatory topics within curriculum.
Case based Discussion (M)	Minimum 4 satisfactory, spread across curriculum and complementary to mini-CEX.	As ST3 with broadening curriculum coverage and complexity.	As ST3 with broadening curriculum coverage and complexity.	As ST3 with broadening curriculum coverage and complexity to include all mandatory topics within curriculum.
Teaching Observation* (R)	Satisfactory TO			Satisfactory TO
Patient Survey (M)			Satisfactory PS	
Direct Observation of Procedural Skills (R)	Lumbar Puncture			
ePortfolio (M)	Evidence of clinical experience commensurate with clinical attachments during ST3.	As ST3 but with increasing coverage of the curriculum.	Evidence of breadth of coverage of the curriculum.	Evidence of experience across the whole curriculum.
Educational and Clinical Supervisor's Reports (M)	To provide triangulation of ePortfolio evidence and context for interpretation of CbD and mini-CEX.	As ST3	As ST3	As ST3
Quality Improvement Projects (QIPAT)or Audit Assessment (M)	Minimum of 2 completed audits (or 1 audit and 1 quality improvement project) in 5 years training programme.			

***** Optional assessment method (strongly recommended)

5.6 Penultimate Year Assessment (PYA)

The penultimate ARCP prior to the anticipated CCT date will include an external assessor from outside the training programme. JRCPTB and the deanery will coordinate the appointment of this assessor. This is known as “PYA”. Whilst the ARCP will be a review of evidence, the PYA will include a face to face component.

5.7 Complaints and Appeals

The MRCP(UK) office has complaints procedures and appeals regulations documented in its website which apply to all examinations run by the Royal Colleges of Physicians including the specialty certificate examination (SCE).

All workplace-based assessment methods incorporate direct feedback from the assessor to the trainee and the opportunity to discuss the outcome. If a trainee has a complaint about the outcome from a specific assessment this is their first opportunity to raise it.

Appeals against decisions concerning in-year assessments will be handled at deanery level and deaneries are responsible for setting up and reviewing suitable processes. If a formal complaint about assessment is to be pursued this should be referred in the first instance to the chair of the Specialty Training Committee who is accountable to the regional deanery. Continuing concerns should be referred to the Associate Dean.

6 Supervision and Feedback

6.1 Supervision

All elements of work in training posts must be supervised with the level of supervision varying depending on the experience of the trainee and the clinical exposure and case mix undertaken. Outpatient and referral supervision must routinely include the opportunity to personally discuss all cases if required. As training progresses the trainee should have the opportunity for increasing autonomy, consistent with safe and effective care for the patient.

Trainees will at all times have a named educational supervisor throughout the 5 years training programme (or longer if time is spent for OOPE) in addition to clinical supervisors in each placement, responsible for overseeing their education. Depending on local arrangements these roles may be combined into a single role of educational supervisor. Trainees may have more than one educational supervisor dependent upon the geography of a local training programme. All educational supervisors will have undergone appropriate training and a record of this will be collected by the STC Chair/TPD in each deanery and forwarded to the SAC in neurology Chair. This training may be deanery, Royal Colleges of Physicians or hospital trust led.

The responsibilities of supervisors have been defined by GMC in the document “Operational Guide for the PMETB Quality Framework”. These definitions have been agreed with the National Association of Clinical Tutors, the Academy of Medical Royal Colleges and the Gold Guide team at MMC, and are reproduced below:

Educational supervisor
A trainer who is selected and appropriately trained to be responsible for the overall supervision and management of a specified trainee's educational progress during a training placement or series of placements. The Educational Supervisor is responsible for the trainee's Educational Agreement.

Clinical supervisor
A trainer who is selected and appropriately trained to be responsible for overseeing a specified trainee's clinical work and providing constructive feedback during a training placement. Some training schemes appoint an Educational Supervisor for each placement. The roles of Clinical and Educational Supervisor may then be merged.

The Educational Supervisor, when meeting with the trainee, should discuss issues of clinical governance, risk management and any report of any untoward clinical incidents involving the trainee. The Educational Supervisor should be part of the clinical specialty team. Thus if the clinical directorate (clinical director) have any concerns about the performance of the trainee, or there were issues of doctor or patient safety, these would be discussed with the Educational Supervisor. These processes, which are integral to trainee development, must not detract from the statutory duty of the trust to deliver effective clinical governance through its management systems.

Opportunities for feedback to trainees about their performance will arise through the use of the workplace-based assessments, regular appraisal meetings with supervisors, other meetings and discussions with supervisors and colleagues, and feedback from ARCP.

6.2 Appraisal

A formal process of appraisals and reviews underpins training. This process ensures adequate supervision during training provides continuity between posts and different supervisors and is one of the main ways of providing feedback to trainees. All appraisals should be recorded in the ePortfolio

Induction Appraisal

The trainee and clinical/educational supervisor should have an appraisal meeting at the beginning of each post to review the trainee's progress so far, agree learning objectives for the post ahead and identify the learning opportunities presented by the post. Reviewing progress through the curriculum will help trainees to compile an effective Personal Development Plan (PDP) of objectives for the upcoming post. This PDP should be agreed during the Induction Appraisal. The trainee and supervisor should also both sign the educational agreement in the e-portfolio at this time, recording their commitment to the training process.

Mid-point Review

This meeting between trainee and educational supervisor is mandatory (except when an attachment is shorter than 6 months), but is encouraged particularly if either the trainee or educational or clinical supervisor has training concerns or the trainee has been set specific targeted training objectives at their ARCP. At this meeting trainees should review their PDP with their supervisor using evidence from the e-portfolio. Workplace-based assessments and progress through the curriculum can be reviewed to ensure trainees are progressing satisfactorily, and attendance at educational events should also be reviewed. The PDP can be amended at this review.

End of Attachment Appraisal

Trainees should review the PDP and curriculum progress with their clinical/educational supervisor using evidence from the e-portfolio. Specific concerns may be highlighted from this appraisal. The end of attachment appraisal form should record the areas where further work is required to overcome any shortcomings. Further evidence of competence in certain areas may be needed, such as planned workplace-based assessments, and this should be recorded. If there are significant concerns following the end of attachment appraisal then the programme director should be informed.

All trainees should meet their educational supervisor approximately 1-2 months before the ARCP date to review the progress in training since the last ARCP. The trainee and educational supervisor should summarise the progress formally in writing in the Educational Supervisor's Report in the ePortfolio to help inform the ARCP process.

It is expected that the educational supervisor will feedback the results of any MSF assessments or any other relevant reports to the trainee and a summary of this assessment will be available to the ARCP panel in the ePortfolio.

7 Managing Curriculum Implementation

7.1 Intended Use of Curriculum by Trainers and Trainees

This curriculum and ePortfolio are web-based documents which are available from the Joint Royal Colleges of Physicians Training Board (JRCPTB) website www.jrcptb.org.uk.

The educational supervisors and trainers can access the up-to-date curriculum from the JRCPTB website and will be expected to use this as the basis of their discussion with trainees. Both trainers and trainees are expected to have a good knowledge of the curriculum and should use it as a guide for their training programme.

Each trainee will engage with the curriculum by maintaining an ePortfolio. The trainee will use the curriculum to develop learning objectives and reflect on learning experiences.

All educational supervisors will have undergone appropriate training on how to be effective educational supervisor. This training should include diversity training and a record of training undertaken will be collected by the STC Chair/TPD in each deanery and forwarded to the SAC in neurology Chair. This training may be deanery, Royal Colleges of Physicians or hospital trust led.

The training of STC Chairs/TPDs will be expected to be more comprehensive than educational supervisors and include sessions on trainees in difficulty (TID), appraisal and teaching techniques (e.g. study days from the Physicians as Educators Course run by the Royal College of Physicians of London).

Developments in the curriculum will be fed to STC Chairs/TPDs from the deanery, SAC or JRCPTB and it will be the responsibility of the STC Chairs/TPDs to disseminate this information to all the educational and clinical supervisors. It is suggested that each STC Chair/TPD hold regular review meetings with all the supervisors to review the local training programme.

7.2 Recording Progress

On enrolling with JRCPTB trainees will be given access to the ePortfolio for neurology. The ePortfolio allows evidence to be built up to inform decisions on a trainee's progress and provides tools to support trainees' education and development.

The trainee's main responsibilities are to ensure the ePortfolio is kept up to date, arrange assessments and ensure they are recorded, prepare drafts of appraisal forms, maintain their personal development plan, record their reflections on learning and record their progress through the curriculum.

The supervisor's main responsibilities are to use ePortfolio evidence such as outcomes of assessments, reflections and personal development plans to inform appraisal meetings. They are also expected to update the trainee's record of progress through the curriculum, write end-of-attachment appraisals and supervisor's reports.

8 Curriculum Review and Updating

The curriculum will be reviewed every 2 years by the curriculum subcommittee of the SAC (including the trainee and lay membership). Changes in neurological practice as the result of changes in NHS services and treatments will be incorporated. Any changes made will then be sent to the JRCPTB and GMC for approval.

9 Equality and Diversity

The Royal Colleges of Physicians will comply, and ensure compliance, with the requirements of equality and diversity legislation, such as the:

- Race Relations (Amendment) Act 2000
- Disability Discrimination Act 1995
- Human Rights Act 1998
- Employment Equality (Age) Regulation 2006
- Special Educational Needs and Disabilities Act 2001
- Data Protection Acts 1984 and 1998

The Federation of the Royal Colleges of Physicians believes that equality of opportunity is fundamental to the many and varied ways in which individuals become involved with the Colleges, either as members of staff and Officers; as advisers from the medical profession; as members of the Colleges' professional bodies or as doctors in training and examination candidates. Accordingly, it warmly welcomes contributors and applicants from as diverse a population as possible, and actively seeks to recruit people to all its activities regardless of race, religion, ethnic origin, disability, age, gender or sexual orientation.

Deanery quality assurance will ensure that each training programme complies with the equality and diversity standards in postgraduate medical training as set by GMC.

Compliance with anti-discriminatory practice will be assured through:

- monitoring of recruitment processes;
- ensuring all College representatives and Programme Directors have attended appropriate training sessions prior to appointment or within 12 months of taking up post;

- Deaneries must ensure that educational supervisors have had equality and diversity training (at least as an e learning module) every 3 years
- Deaneries must ensure that any specialist participating in trainee interview/appointments committees or processes has had equality and diversity training (at least as an e module) every 3 years.
- ensuring trainees have an appropriate, confidential and supportive route to report examples of inappropriate behaviour of a discriminatory nature. Deaneries and Programme Directors must ensure that on appointment trainees are made aware of the route in which inappropriate or discriminatory behaviour can be reported and supplied with contact names and numbers. Deaneries must also ensure contingency mechanisms are in place if trainees feel unhappy with the response or uncomfortable with the contact individual.
- monitoring of College Examinations;
- ensuring all assessments discriminate on objective and appropriate criteria and do not unfairly disadvantage trainees because of gender, ethnicity, sexual orientation or disability (other than that which would make it impossible to practise safely as a physician). All efforts shall be made to ensure the participation of people with a disability in training.

In order to meet its obligations under the relevant equal opportunities legislation, such as the Race Relations (Amendment) Act 2000, the MRCP(UK) Central Office, the Colleges' Examinations Departments and the panel of Examiners have adopted an Examination Race Equality Action Plan. This ensures that all staff involved in examination delivery will have received appropriate briefing on the implications of race equality in the treatment of candidates.

All Examiner nominees are required to sign up to the following statement in the Examiner application form "I have read and accept the conditions with regard to the UK Race Relations Act 1976, as amended by the Race Relations (Amendment) Act 2000, and the Disabilities Discrimination Acts of 1995 and 2005 as documented above."

In order to meet its obligations under the relevant equal opportunities legislation such as the Disability Discrimination Acts 1995 and 2005, the MRCP(UK) Management Board is formulating an Equality Discrimination Plan to deal with issues of disability. This will complement procedures on the consideration of special needs which have been in existence since 1999 and were last updated by the MRCP(UK) Management Board in January 2005. MRCP(UK) has introduced standard operating procedures to deal with the common problems e.g. Dyslexia/Learning disability; Mobility difficulties; Chronic progressive condition; Blind/Partially sighted; Upper limb or back problem; Repetitive Strain Injury (RSI); Chronic recurrent condition (e.g. asthma, epilepsy); Deaf/Hearing loss; Mental Health difficulty; Autism Spectrum Disorder (including Asperger Syndrome); and others as appropriate. The Academic Committee would be responsible for policy and regulations in respect of decisions on accommodations to be offered to candidates with disabilities.

The Regulations introduced to update the Disability Discrimination Acts and to ensure that they are in line with EU Directives have been considered by the MRCP(UK) Management Board. External advice was sought in the preparation of the updated Equality Discrimination Plan, which has now been published.