General Medical Council

Clinical Neurophysiology

Specialty Specific Guidance

This guidance is to help doctors who are applying for entry onto the Specialist Register with a CESR in Clinical Neurophysiology. You will also need to read the CCT curriculum in Clinical Neurophysiology

This is the specialty specific guidance for Clinical Neurophysiology updated June 2021

Please make sure you are reading the latest version. You can find all the guidance you need at www.gmc-uk.org.

Introduction

This document is designed to provide helpful information and guidance to enable you to make an application for a Certificate of Eligibility for Specialist Registration (CESR) in Clinical Neurophysiology. This is not a standalone document and should be read in conjunction with the CCT curriculum for Clinical Neurophysiology curriculum – please see the Clinical Neurophysiology specialty page on the Joint Royal Colleges of Physicians Training Board (JRCPTB) website for more details. You can contact us for advice before you apply.

What is the indicative period of training for a Certificate of Completion of Training (CCT) in Clinical Neurophysiology?

The indicative period of training for a CCT in Clinical Neurophysiology is 6 years and it is unlikely that you would achieve all the learning outcomes required for a CCT in a shorter period of time.

The structure of the training programme (in indicative timescales) is as follows:

- Two years of Internal Medicine (stage 1) or three years of Acute Care Common Stem – Internal Medicine (ACCS-IM) including MRCP (UK) or one of the following alternative pathways:

  Three years of Level 1 Paediatrics training (including MRCPCH)

- 4 years of Clinical Neurophysiology specialty training

Applicants need to demonstrate that they have achieved the learning outcomes required for all stages of the curriculum.

Curriculum Framework

The Clinical Neurophysiology curriculum is structured into 12 high-level learning outcomes, known as Capabilities in Practice (CiPs). The CiPs are split into generic and specialty specific capabilities, as outlined below. Acquiring a CESR depends upon you providing evidence that you're working at the level of being entrusted to perform safely and independently for each CiP.

The first six CiPs are generic and shared across all physician specialties, covering the universal requirements of Good Medical Practice and the Generic Professional Capabilities (GPC) framework.

The remaining six CiPs describe the clinical tasks or activities which are essential to the practice of Clinical Neurophysiology. The CiPs have been mapped to the GPC domains to reflect the professional generic capabilities required to undertake the clinical tasks.

The range of experience needed to achieve the CiPs is outlined in the curriculum – this covers different settings, contexts, clinical problems, conditions and stages of a person's life and illness.

Generic CiPs
1. Able to function successfully within NHS organisational and management systems
2. Able to deal with ethical and legal issues related to clinical practice
3. Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement
4. Is focussed on patient safety and delivers effective quality improvement in patient care
5. Carries out research and manages data appropriately
6. Acts as a clinical teacher and clinical supervisor

Specialty Specific CiPs
1. Managing and delivering a basic adult and paediatric NCS / EMG service
2. Managing and delivering a basic adult and paediatric EEG service

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3. Managing and delivering a basic adult and paediatric Evoked Potential (EP) service
4. Managing and delivering an advanced adult and paediatric NCS / EMG service
5. Managing and delivering an advanced adult and paediatric adult and paediatric EEG service
6. Managing and delivering an advanced adult and paediatric Evoked Potential service

Submitting your evidence

Please keep the following in mind when gathering your evidence:

- The evaluators want to see quality, relevant evidence to demonstrate the required CiPs. It's more important to carefully select your evidence and present it in an organised way, than provide large volumes of minimally relevant evidence
- Triangulated evidence will make a stronger application
- Evidence of your recent practice (i.e. less than 5 years old) will be given more weight, as it reflects current capabilities
- Your evidence must be legible

All your evidence, other than qualifications you're getting authenticated, **must** be accompanied by a proforma signed by the person who is attesting to the validity and accuracy of your evidence (your verifier). It's very important that you read an explanation of how to do this in our important notice about evidence.

You will also need to submit translations of any documents that are not in English. Please ensure the translations you submit meet our translation requirements.

Your evidence **must** be accurate and may be verified at source should we have any queries or justifiable doubts about the accuracy of your evidence. All evidence submitted will be cross checked against the rest of your application and documents.

Anonymising your evidence

It is important that you anonymise your evidence before you submit it to us. You **must** remove:

- All patient identifying details
- Details of patients' relatives
- Details of colleagues that you have assessed, written a reference for, or who have been involved in a complaint you have submitted

This includes:

- Names (first and last)
- Addresses
- Contact details such as phone numbers or email addresses
- NHS numbers
- Other individual patient numbers
- GMC numbers

The following details **don't** need to be anonymised:

- Gender
- Date of birth

It is your responsibility to make sure that your evidence has been anonymised. Evidence which has not been anonymised will be returned to you. More information can be found on our website.

How much evidence to submit

As a general guide, most applications are expected to include around 100 electronically uploaded documents. You must ensure that you follow our guidance on how to present and group your evidence in the online application.

The total number of documents and assessments presented is less important than the quality of the documents, and the breadth of cases covered. This allows the evaluators to form reliable judgements of performance and capabilities.

This guidance on documents to supply is not exhaustive and you may have alternative evidence. You do not necessarily have to supply every type of evidence listed, but you must submit sufficient evidence to address each of the required learning outcomes and the associated capabilities. We recognise that you may not have all the evidence that is required but it will help us process your application more quickly if you ensure that you only submit evidence that is directly relevant. Triangulation of evidence will strengthen an application, and we recommend that you delay submitting an application until you have achieved this.

Your evidence **must** cover the knowledge, skills and experience to demonstrate the required CiPs in all areas of the curriculum. You should focus on providing **good quality** evidence, rather than quantity. You are advised to review the curriculum and ARCP decision aid to see what is expected from doctors in training in Clinical Neurophysiology in the UK.

You should bear in mind the following points:

- Evidence should show that you are able to assess and offer a first opinion in any setting and for any age
- Don't duplicate evidence that is relevant to more than one CiP – you should include one copy and list it under each relevant CiP (cross referencing)
- Evidence should only be cross referenced where it adds significant support to a CiP
- Evidence should be provided from a variety of clinical settings.

Our guidance on compiling your evidence will help you to decide what is relevant and what is not. We recommend that you read it carefully.

Organising your evidence

Your evidence will need to be organised to reflect the structure of the online application. You need to gather your evidence by CiP and then attach this under the relevant section in your online application.

Please refer to our user guide for information on grouping and uploading your evidence.

Your evidence must be mapped to the curriculum by providing primary evidence for knowledge, skills and qualifications to demonstrate the required CiPs for all areas of the CCT curriculum in Clinical Neurophysiology. If evidence is missing from any area of the curriculum, your application may be unsuccessful.

You will not be able to compensate for shortfalls in your evidence of training and experience in a particular area, by providing extra evidence in other areas.

Tips for a successful application

In our experience, CESR applications fail because they provide inadequate or poor evidence of current capability covering the entire curriculum. Below are some tips for you to consider when making an application:

- Before submitting an application, you should review the current CCT curriculum in conjunction with this document. A strong CESR application will provide evidence to demonstrate that knowledge, skills and experience are equivalent in both the breadth and level of capability, to that set out in the curriculum

- Provide evidence of your **current capability** in all areas of the curriculum. This includes the maintenance of CiPs and key skills over the last five years – all evidence should be clearly linked to the CiPs

- Ensure you have evidence demonstrating core medical knowledge and application of this knowledge in practice to the level of two years of Internal Medicine stage 1 training. To demonstrate core internal medical capabilities, applicants need to provide MRCP (UK) or equivalent and evidence showing the application of core skills including outpatient capability. This evidence could include supervised learning events (SLEs) and workplace based assessments (WPBAs) including multisource feedback (MSF). Evidence for alternative core medical knowledge and training can be provided – e.g. MRCPCH.

- Present your evidence in a clear, logical manner. You should refer to our user guide for advice on how to group, title and upload your evidence
- Ensure your referees can provide detailed support for your key skills across all (or most) areas of the curriculum and understand the requirements for specialist training and registration in Clinical Neurophysiology in the UK
- Provide evidence of managing a broad range of patients, as seen daily by Clinical Neurophysiology doctors in the UK
- Provide evidence of your clinical capability across the range of experience, ages and settings
- Ensure your evidence demonstrates you are entrusted to act at consultant level across all of the specialty CiPs

We strongly recommend that you closely match your experiences against the current curriculum and provide evidence of equivalence across all areas.

How your evidence can be used to demonstrate key capabilities in different CiPs

You will notice that some of the suggested evidence is listed more than once. This is because these documents are relevant to more than one CiP. For example, MSF can be used to demonstrate competence in most CiPs – therefore, you can use the same MSF to demonstrate the required capability across several CiPs

If you have a document that is relevant to more than one CiP, don't include multiple copies of it. Instead, provide one copy and list it in your application under each relevant CiP, stating that the document is located elsewhere, and you'd like to cross reference it.

Below is a list of evidence that are relevant to most CiPs – it is by no means exhaustive, and you are encouraged to submit a variety of evidence.

A description of the assessments below, together with template forms, can be found on the JRCPTB website

Evidence / requirement	About	Minimum expectation
Supervised Learning Events (SLEs)		
Case-based discussion and/ or mini-clinical evaluation exercise (mini-CEX)	These should have been undertaken with a consultant. CbDs and Mini CEXs should cover different aspects of Clinical Neurophysiology	Minimum of 30 across the range of clinical scenarios and areas of practice
Workplace Based Assessments (WPBAs)		

Direct Observation of Procedural Skills (DOPS)	Evidence of procedural competence.	See CiPs
Quality Improvement Project Assessment Tool (QIPAT)	Can be used to demonstrate active involvement in service audit or development projects.	1 completed in last 12 months
Patient Survey (PS)	Formal patient feedback is strong evidence as it's an anonymous feedback exercise. It should include approximately 15 patients. The JRCPTB has a template available on their website. A reflective entry reflecting on the survey must be made. If it is not possible to provide a formal patient survey an applicant could provide alternative evidence. However, this must provide equivalent details and breadth of information. Alternative evidence could include: ▪ Thank you letters/cards from patients ▪ Statements from referees ▪ Testimonial letters from colleagues ▪ Feedback from patients/colleagues	1 completed in last 12 months
Teaching observation (TO)	At least one should be completed by a consultant in Clinical Neurophysiology.	Minimum of 2, including 1 within past 12 months

Multi Source Feedback (MSF)	MSF is a strong piece of evidence as it is an anonymous feedback exercise. Minimum of one in the year before the application has been submitted – any available from the last five years should also be submitted. MSF should include approximately 15 colleagues, and not more than 4 should be doctors.	1 completed in last 12 months
Other evidence		
To be included in the portfolio of evidence	▪ **Appraisal** is good evidence of engaging with systems, processes and mandatory requirements and demonstrates performance (clinical and non-clinical) ▪ **Reflective** diaries/ evidence of self-reflection ▪ **Supervisor report** reports from trainers and supervisors are important evidence to affirm and support capabilities and performance in both clinical and non-clinical activities. JRCPTB provides a Multiple Consultant Report (MCR) template for the purpose of these reports of which there should be four in the last 12 months. ▪ **Logbooks** must cover the last five years and show the type of procedures you performed and your role in the procedure ▪ **Training events** (courses, study days, meetings) over the last five years ▪ **Evidence of seeing patients** over the last five years covering a range of settings, referral contexts, conditions, stages of illness, ages ▪ **Academic activities**	4 completed in the last 12 months (e.g. MCRs)

	▪ **Management activities** ▪ **Structured reports**	
Continuing Professional Development (CPD)	CPD represents the acquisition and maintenance of knowledge, skills and key skills. Courses you may want to provide evidence of include: ▪ Life support ▪ Teaching ▪ Simulation ▪ Management ▪ Research methodology ▪ Business ▪ Communication ▪ Education Examples of evidence could include a personal, reflective diary of learning achievements, in addition to detailed evidence of courses attended.	

Practical Procedures

Below details the practical procedures you will be expected to evidence that you are competent to perform unsupervised. You can provide evidence for these procedures using logbooks and DOPs.

Record Adult EEG
Record Neonatal/ Paediatric EEG
Report Adult EEG
Report Neonatal/ Paediatric EEG
NCS for common nerve entrapments
NCS for less common nerve lesions
NCS for generalised neuropathy
EMG for neurogenic disorders
NCS and/or EMG in Paediatrics (5-16 years)
NCS and/or EMG is Paediatrics (<5 years)
EMG for probable myopathy
Repetitive nerve stimulation
Record VEP
Interpret VEP
Record SSEP

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Interpret SSEP
Surgical monitoring of spinal, cortical or cranial nerve function
Interpret ambulatory EEG, Surgical telemetry, diagnostic telemetry
Interpret polysomnography
Perform & interpret MUP and Turns/amp analysis
Perform & interpret single fibre EMG (voluntary and/ or stimulated)
Interpret electroretinograms
Interpret ER audiograms/BSAEPs
Perform & interpret magnetic brain stimulation

Evidence of training and qualifications

Substantial primary evidence for any previous training towards a medical qualification should **only** be submitted if the training is directly relevant to your CESR capabilities **and** dates from the past five years. Otherwise, certificates of completion are sufficient evidence of training.

Primary medical qualification (PMQ)	If you hold full registration with us, you do not need to submit your PMQ as we saw it when we assessed your application for registration. If you do not hold registration, you will need to have your PMQ independently verified by ECFMG before we can grant you full registration with a licence to practise. You can find out more about primary source verification on our website. You only need to get your PMQ verified by ECFMG. The rest of your evidence should be verified in line with our guidance.
Specialist medical qualification(s)	Please provide an **authenticated copy** of any specialist medical qualifications you hold. Evidence of completion of full **MRCP(UK)** or equivalent test of knowledge. Alternative tests of knowledge are acceptable for applicants demonstrating alternative core capabilities in paediatrics- **MRCPCH.** There are no qualifications from outside Europe that enable automatic entry to the Specialist Register in any specialty. An evaluation is made based on an applicant's whole career and therefore two applicants with the same qualifications but different training and/or experience may not receive the same decision.

	If your specialist medical qualification is from outside the UK, please ensure that you provide the following evidence **in addition** to your qualification: o Training curriculum or examination syllabus o Formal period assessments completed during training (these may be older than 5 years)
Recent specialist training	If you have worked in posts approved for a specialist training programme for a relevant qualification outside the UK in the past five years, please provide an **authenticated copy** of the curriculum or syllabus that was in place when you undertook your training. If a formal curriculum or syllabus (including assessment methods) is not available please provide a letter from the awarding body outlining the content of the training programme or examination. You must provide evidence of formal periodic assessment during your training. This evidence must have been completed at the time the training was undertaken (if it is completed retrospectively less weight will be given to the information provided). If you do not supply formal assessment documents, the curriculum must demonstrate how you were assessed. A detailed letter of verification from an educational supervisor would satisfy this requirement. If areas for development were highlighted, please provide evidence to demonstrate that you have subsequently addressed them. If you have undertaken approved specialty training towards a CCT or CESR(CP) in Clinical Neurophysiology in the UK in the past five years, you should provide a copy of your ARCPs.
Specialist registration outside the UK	Please provide an **authenticated copy** of details of the registration requirements of that authority.

Other relevant qualifications and certificates	You may include postgraduate qualifications if they are relevant to associated capabilities e.g. teaching, management, research methodology. Please provide **copies** of certificates.

Evidence of employment in posts and duties (including training posts)

Employment letters and contracts of employment	The information in these letters and contracts **must** match your CV. They will confirm the following: ▪ dates you were in post ▪ post title, grade, training ▪ type of employment: permanent, fixed term, or part time (including percentage of whole time equivalent)
Job descriptions	These **must** match the information in your CV. They will confirm the following: ▪ your position within the structure of your department ▪ your post title ▪ your clinical and non-clinical commitment ▪ your involvement in teaching or training.

Rotas	You must provide samples of your rotas from the last three years. These should demonstrate your weekly clinical and non-clinical activities. For example, if you worked a 1:8 rota, you should submit eight consecutive weeks' rota to represent that placement.
Departmental/ Unit annual caseload statistics	You should provide departmental and unit caseload statistics, activity data, range and scope of work undertaken in a placement from the last three years.
Appraisal	Those working in an NHS or managed environment should submit evidence of annual appraisals. A revalidation or appraisal portfolio would be appropriate (if it is completed retrospectively less weight will be given to the information provided). For non-training posts you should provide evidence of ongoing evaluation of your performance. This may take the format of formal appraisals by the department head or line manager (clinical director, medical director, professor). For those applicants working in independent practice it is recommended that at least one employer. Appraisal is undertaken and summary documentation of this submitted with the application. Where an applicant is not based in the UK alternative forms of appraisal are strongly advised. Alternative evidence may include letters (written at the time) commenting on your performance. In addition, where no formal appraisal or assessment forms are available you must provide information on the method of career review or progression.

Generic CiPs

The suggested documentation is given below each CiP and the overall numbers expected are given in the section above. Each piece of evidence can support more than one CiP and you should cross reference

CiP 1: Able to function successfully within NHS organisational and management systems

Key skills:

- Aware of, and adheres to, the GMC professional requirements
- Aware of public health issues including population health, social determinants of health and global health perspectives
- Demonstrates effective clinical leadership
- Demonstrates promotion of an open and transparent culture
- Keeps up to date through learning and teaching
- Demonstrates engagement in career planning
- Demonstrates capabilities in dealing with complexity and uncertainty
- Aware of the role and processes for commissioning
- Aware of the need to use resources wisely

Suggested documentation:

▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR)
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Evidence of taking an active role in governance structures, including service development. This may, for example, include the minutes of meetings for governance and unit management in which the applicant has been involved, MDT meetings, and any documented service development initiatives such as QIPAT.

- Evidence of attendance at an NHS / health service management course

CiP 2: Able to deal with ethical and legal issues related to clinical practice

Key skills:

- Aware of national legislation and legal responsibilities, including safeguarding vulnerable groups
- Behaves in accordance with ethical and legal requirements
- Demonstrates ability to offer apology or explanation when appropriate
- Demonstrate ability to lead the clinical team in ensuring that ethical and legal factors are considered openly and consistently

Suggested documentation:

- Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports
- Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
- Evidence of ability to assess the mental capacity of patients to make healthcare decisions. Evidence could include:
  - Reflections on cases where you had to assess a patient's mental capacity
- Evidence of involvement in making best interests' decisions, such as:
  - Notes
  - Letters
  - Meeting minutes

- Awareness of relevant legislation, including mental capacity legislation by completion of an online training course, for example:
  - eLfH Mental Capacity Act: https://www.e-lfh.org.uk/programmes/mental-capacity-act/
  - CPD Online Mental Capacity Act: https://cpdonline.co.uk/course/mental-capacity-act/
  - SCIE Mental Capacity Act: https://www.scie.org.uk/e-learning/mca

CiP 3: Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement

Key skills:

- Communicates clearly with patients and carers in a variety of settings
- Communicates effectively with clinical and other professional colleagues
- Identifies and manages barriers to communication (e.g. cognitive impairment, speech and hearing problems, capacity issues)
- Demonstrates effective consultation skills including effective verbal and non-verbal interpersonal skills
- Shares decision making by informing the patient, prioritising the patient's goals and wishes, and respecting the patient's beliefs, concerns and expectations
- Shares decision making with children and young people
- Applies management and team working skills appropriately, including influencing, negotiating, re-assessing priorities and effectively managing complex, dynamic situations

Suggested documentation:

- Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports
- Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)

- Evidence of your ability to analyse a patient's communication difficulties:
  - Reflective diaries
- Feedback from patients, such as a patient survey
- Reflective practice entries about patients or families who posed difficulties
- Supervised learning event

CiP 4: Is focused on patient safety and delivers effective quality improvement in patient care

Key skills:

- Makes patient safety a priority in clinical practice
- Raises and escalates concerns where there is an issue with patient safety or quality of care
- Demonstrates commitment to learning from patient safety investigations and complaints
- Shares good practice appropriately
- Contributes to and delivers quality improvement
- Understands basic Human Factors principles and practice at individual, team, organisational and system levels
- Understands the importance of non-technical skills and crisis resource management
- Recognises and works within limit of personal competence
- Avoids organising unnecessary investigations or prescribing poorly evidenced treatments

Suggested documentation:

- Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports
- Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
- Reflective practice entries about patients or families who posed difficulties

▪ Evidence that you have arranged and attended meetings about a patient with Social Services or other non-health organisations. For example: • Meeting minutes, demonstrating your attendance and participation • Invites sent from you demonstrating arranging meetings
▪ Supervised learning event
▪ Documented evidence of development of procedures to improve inter-service and inter-agency communication, you will need to demonstrate your involvement in the new procedure and its effectiveness
▪ Specific quality improvement activity, such as a QIPAT
▪ Copies of letters you have written to NHS and non-NHS services involved with patients

CiP 5: Carries out research and manages data appropriately

Key skills:

- Manages clinical information / data appropriately
- Understands principles of research and academic writing
- Demonstrates ability to carry out critical appraisal of the literature
- Understands the role of evidence in clinical practice and demonstrates shared decision making with patients
- Demonstrates appropriate knowledge of research methods, including qualitative and quantitative approaches in scientific enquiry
- Demonstrates appropriate knowledge of research principles and concepts and the translation of research into practice
- Follows guidelines on ethical conduct in research and consent for research
- Understands public health epidemiology and global health patterns
- Recognises potential of applied informatics, genomics, stratified risk and personalised medicine and seeks advice for patient benefit when appropriate

Suggested documentation:

- Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports
- Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
- Evidence of completion of Good Clinical Practice (GCP) training:
  - www.nihr.ac.uk/health-and-care-professionals/learning-and-support/good-clinical-practice
- Documented evidence of research activity. This may include evidence of:
  - Helping in a project
  - Reviewing research papers / grants
  - Writing and co-authoring research papers
  - Contributing to research projects
- Presentations – either lectures (podium presentations) or poster presentations
- Publications

CiP 6: Acts as a clinical teacher and clinical supervisor

Key skills:

- Delivers effective teaching and training to medical students, junior doctors and other healthcare professionals
- Delivers effective feedback with action plan
- Able to supervise less experienced trainees in their clinical assessment and management of patients
- Able to supervise less experienced trainees in carrying out appropriate practical procedures

- Able to act as a clinical supervisor to doctors in earlier stages of training

Suggested documentation:

▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Completion of relevant training course(s), such as management or leadership courses
▪ Feedback from formal teaching sessions to medical and non-medical staff: • Teaching Observation SLE (TO)

Specialty Specific CiPs

Applicants must demonstrate that they are currently practising at the level of 'entrusted to act independently' in all specialty CiPs. Further detail regarding the descriptors for the key skills in each specialty specific CiP can be found in the curriculum.

Specialty CiP 1: Managing and delivering a basic adult and paediatric NCS / EMG service

Key skills:

- Leads the multidisciplinary team in the investigation of peripheral nerve and muscle disorders.
- Utilises nerve conduction and electromyography equipment and understands how and why they work.
- Makes decisions about purchasing and ordering equipment to perform investigations.
- Complies with laws and regulations regarding health and safety, confidentiality, information governance and safeguarding of vulnerable patients.
- Ensures quality assurance through audit and quality improvement projects.
- Understands the anatomy and physiology of the central and peripheral nervous systems and muscles.
- Understands the effects of different pathologies on central and peripheral nervous systems and muscle and how they are investigated.
- Performs sensory and motor nerve conduction studies, F Waves, H reflexes, blink reflexes, repetitive nerve stimulation and electromyography.
- Recognises electrical artefacts and knows how to overcome them.
- Assesses referrals for likely diagnosis and recommends investigation protocols.
- Assesses, examines and performs investigations to look for neuromuscular disease and disorders of the anterior horns.
- Assesses clinical and physiological findings, and formulates and produces a report detailing likely diagnosis, anatomical location of a lesion, pathology and prognosis, further investigations and treatment as appropriate.
- Assesses clinical and physiological findings and communicates the findings with patients and colleagues effectively

Suggested documentation:

▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR)
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Direct observation of procedural skills such as DOPS (3 per procedure)
▪ Logbook with lists of procedures performed
▪ Minimum of **one of each** of the below supervised learning events (SLEs): o CbDs o Mini CEXs
▪ Quality improvement activity, such as a QIPAT

Specialty CiP 2: Managing and delivering a basic adult and paediatric Electroencephalography (EEG)service

Key skills:

- Leads the multidisciplinary team in the investigation of seizures, disorders of consciousness and organic brain disease.
- Utilises electroencephalography equipment and understands how and why they work.
- Makes decisions about purchasing and ordering equipment to perform investigations.
- Complies with laws and regulations regarding health and safety, confidentiality, information governance and safeguarding of vulnerable patients.

- Ensures quality assurance through audit and quality improvement projects.
- Understands the anatomy and physiology of the central nervous system.
- Understands the effects of different pathologies on the brain and how they are investigated.
- Performs EEG recordings in adults and children.
- Recognises electrical artefacts and knows how to overcome them.
- Assesses referrals for likely diagnosis and recommends investigation protocols including the use of hyperventilation and photic stimulation, length of recording, sleep, sleep deprivation and autosuggestion.
- Recognises benign variants in EEG traces
- Understands and recognises the effect of age on EEG traces.
- Understands and takes account of medication and its effects.
- Assesses, examines and interprets investigations and video recordings to look for patients with suspected seizure disorders, non-epileptic attacks and organic brain disease.
- Assesses clinical and physiological findings, and formulates and produces a report detailing likely diagnosis, anatomical location of a lesion, pathology and prognosis, further investigations and treatment as appropriate.
- Assesses clinical and physiological findings and communicates the findings with patients and colleagues effectively.

Suggested documentation:

▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR)
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Direct observation of procedural skills such as DOPS (3 per procedure)
▪ Logbook with lists of procedures performed

▪ Quality improvement activity, such as a QIPAT
▪ Minimum of **one of each** of the below supervised learning events (SLEs): o CbDs o Mini CEXs
▪ Attendance at learning events and/or relevant certification

Specialty CiP 3: Managing and delivering a basic adult and paediatric Evoked Potentials (EP) service

Key skills:

- Leads the multidisciplinary team in the investigation of peripheral and central nervous system disorders using visual evoked potentials (VEPs) and somatosensory sensory evoked potentials (SSEPs).
- Utilises recording and stimulating equipment and understands how and why they work.
- Makes decisions about purchasing and ordering equipment to perform investigations.
- Complies with laws and regulations regarding health and safety, confidentiality, information governance and safeguarding of vulnerable patients.
- Ensures quality assurance through audit and quality improvement projects.
- Understands the anatomy and physiology of the peripheral and central nervous system.
- Understands the effects of different pathologies on the nervous system and how they are investigated.
- Performs VEP, SSEP and motor evoked potential (MEP) recordings in adults and children.
- Performs and interprets SSEP recordings during spinal or cranial surgery to monitor neurological function or identify neurological structures and anatomy.
- Recognises electrical artefacts and knows how to overcome them.
- Assesses referrals for likely diagnosis or region of injury and recommends investigation protocols.
- Understands and recognises the effect of age on evoked potential traces.
- Understands and takes account of medication and cooling.

- Assesses, examines and interprets VEPs in patients with neuroinflammatory disease, disorders of optic nerve routing and optic nerve compression.
- Assesses, examines and interprets SSEPs in patients with demyelinating disease scoliosis, and hypoxic brain injury.
- Assesses, examines and interprets motor evoked potential and/or SSEPs in patients during cranial or spinal surgery
- Assesses nerve root functioning during spinal surgery
- Assesses clinical and physiological findings, formulates and produces a report detailing likely diagnosis, anatomical location of a lesion, pathology and prognosis, further investigations and treatment as appropriate.
- Assesses clinical and physiological findings and communicates the findings with patients and colleagues effectively.

Suggested documentation:

▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR)
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Reflective practice entries about patients or families who posed difficulties
▪ Direct observation of procedural skills such as DOPS (3 per procedure)
▪ Logbook with lists of procedures performed
▪ Minimum of **one of each** of the below supervised learning events (SLEs): o CbDs o Mini CEXs
▪ Quality improvement activity, such as a QIPAT

Specialty CiP 4: Managing and delivering an advanced adult and paediatric adult and paediatric EMG service

Key skills:

Motor Unit Analysis and Turns/Amplitude Analysis

- Performs electromyography and records and analyses motor units to measure amplitude, duration and turns / amplitude analysis
- Interprets findings to differentiate between neurogenic and myopathic disorders
- Assesses clinical and physiological findings, and formulates and produces a report detailing likely diagnosis, anatomical location of a lesion, pathology and prognosis, further investigations and treatment as appropriate.
- Assesses clinical and physiological findings and communicates the findings with patients and colleagues effectively

Single fibre EMG

- Performs stimulated and voluntary single fibre electromyography and records jitter and block to assess the function of the neuromuscular junction
- Interprets findings to identify disorders of neuromuscular junction transmission
- Assesses clinical and physiological findings, and formulates and produces a report detailing likely diagnosis, anatomical location of a lesion, pathology and prognosis, further investigations and treatment as appropriate.
- Assesses clinical and physiological findings and communicates the findings with patients and colleagues effectively

Suggested documentation:

▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR)
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Direct observation of procedural skills such as DOPS (3 per procedure)
▪ Logbook with lists of procedures performed
▪ Quality improvement activity, such as a QIPAT
▪ Minimum of **one of each** of the below supervised learning events (SLEs): o CbDs o Mini CEXs
▪ Reflective practice entries about patients or families who posed difficulties

Specialty CiP 5: Managing and delivering an advanced adult and paediatric adult and paediatric EEG service

Key skills:

Long-term EEG monitoring

- Leads the multidisciplinary team in the investigation of seizures, disorders of consciousness, disorders of sleep and organic brain disorders.
- Utilises electroencephalography and polysomnography equipment and understands how and why they work.
- Ensures quality assurance through audit and quality improvement projects.
- Assesses referrals for likely diagnosis and recommends appropriate investigation protocols including EEG recordings, drug reduction, duration of recording, polysomnography
- Understands and takes account of medication and its effects.
- Recognises and interprets EEG correlates of different seizure types
- Understands the role of EEG in presurgical assessment of epilepsy
- Understands the role of EEG is the management of status epilepticus
- Recognises and interprets common ECG changes in cardiac arrhythmias associated with loss of consciousness
- Assesses history, clinical and physiological findings of ambulatory EEGs and video EEG telemetry, and formulates and produces a report detailing likely diagnosis, anatomical location of a lesion, pathology and prognosis, further investigations and treatment as appropriate.
- Assesses clinical and physiological findings of ambulatory EEGs and video EEG telemetry, and communicates the findings with patients and colleagues effectively.

Clinical Neurophysiology support for Epilepsy Surgery

- Leads the multidisciplinary team in the investigation of seizures in patients being considered for surgical treatment
- Utilises electroencephalography and polysomnography equipment and understands how and why they work.
- Ensures quality assurance through audit and quality improvement projects.
- Assesses referrals for likely diagnosis and recommends appropriate investigation protocols including intracranial

and extracranial recordings, depth electrodes, drug reduction, duration of recording, polysomnography

- Understands and takes account of medication and its effects.
- Recognises and interprets seizure semiology
- Recognises and interprets scalp EEG correlates of different seizure types
- Elicits and assesses seizure histories and proposes a differential diagnosis
- Recognises and interprets common ECG changes in cardiac arrhythmias associated with loss of consciousness
- Assists the surgeon and supervises the physiologist in setting up and performing intra-operative electrocorticographic recordings and in identification and correction of common artefacts and faults
- Assesses clinical and physiological findings of scalp and intracranial EEGs and formulates a report detailing likely diagnosis, anatomical location of a lesion, pathology and prognosis, further investigations and treatment as appropriate.
- Assesses clinical and physiological findings of scalp EEG and intracranial EEG is patients in epilepsy surgery programmes, and communicates the findings with patients and colleagues effectively.

Polysomnography and Multiple Sleep Latency Testing (MSLT)

- Leads the multidisciplinary team in the investigation of disorders of sleep
- Utilises electroencephalography and polysomnography equipment and understands how and why they work.
- Ensures quality assurance through audit and quality improvement projects.
- Assesses referrals for likely diagnosis and recommends appropriate investigation protocols including EEG recordings, duration of recording, polysomnography, MSLT
- Understands and recognises the effect of age on EEG traces.
- Understands and takes account of medication and its effects, examines and interprets investigations and video recordings to look for patients with suspected parasomnias and sleep disorders
- Elicits and assesses sleep disorder histories and proposes a differential diagnosis

- Identifies American Academy of Sleep Medicine EEG sleep stages and recognises abnormal patterns
- Interprets MSLT recordings
- Assesses clinical and physiological findings of EEG and polysomnography and formulates a report detailing likely diagnosis, anatomical location of a lesion, pathology and prognosis, further investigations and treatment as appropriate.
- Assesses clinical and physiological findings of EEG and polysomnography and communicates the findings with patients and colleagues effectively.

Suggested documentation:

▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR)
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Direct observation of procedural skills such as DOPS (**three** per procedure)
▪ Logbook with lists of procedures performed
▪ Minimum of **one of each** of the below supervised learning events (SLEs): o CbDs o Mini CEXs
▪ Quality improvement activity, such as a QIPAT
▪ Reflective practice entries about patients or families who posed difficulties

Specialty CiP 6: Managing and delivering an advanced adult and paediatric Evoked Potential service

Key skills:

In addition to managing and delivering a basic adult and paediatric evoked potential service, an applicant must demonstrate competency in leading two of the following advanced services.

Visual electrophysiology

- Leads the multidisciplinary team in the investigation of patients with suspected retinopathy and optic nerve disease
- Utilises recording electrodes, VEP equipment, Ganzfeld stimulator and multifocal ERG stimulators and understands how and why they work.
- Ensures quality assurance through audit and quality improvement projects.
- Assesses referrals for likely diagnosis and recommends appropriate investigation protocols including VEP, Electroretinograms, Electro-oculograms and Multifocal ERG
- Understands and recognises the effect of age on ERG traces.
- Understands and takes account of medication and its effects.
- Assesses clinical and physiological findings, and formulates and produces a report detailing likely diagnosis, anatomical location of a lesion, pathology and prognosis, further investigations and treatment as appropriate.
- Assesses clinical and physiological findings and communicates the findings with patients or colleagues effectively.

Brainstem auditory evoked potentials (BAEP)

- Leads the multidisciplinary team in the investigation of patients with hearing or balance impairment or suspected brainstem disease
- Utilises recording electrodes and acoustic stimulators and knows how and why they work.
- Ensures quality assurance through audit and quality improvement projects.
- Recognises electrical artefacts and knows how to overcome them.
- Assesses referrals for likely diagnosis and recommends appropriate investigation protocols.

- Understands and recognises the effect of age on BAEP traces.
- Understands and takes account of medication and its effects.
- Assesses clinical and physiological findings, and formulates and produces a report detailing likely diagnosis, anatomical location of a lesion, pathology and prognosis, further investigations and treatment as appropriate.
- Assesses clinical and physiological findings and communicates the findings with patients or colleagues effectively.

Event and movement-related cortical potentials

- Leads the multidisciplinary team in the investigation of patients with event and movement-related cortical potentials
- Utilises recording electrodes and stimulators and knows how and why they work.
- Ensures quality assurance through audit and quality improvement projects.
- Recognises electrical artefacts and knows how to overcome them.
- Assesses referrals for likely diagnosis and recommends appropriate investigation protocols.
- Understands and recognises the effect of age on EP traces
- Understands and takes account of medication and its effects.
- Assesses clinical and physiological findings, and formulates and produces a report detailing likely diagnosis, anatomical location of a lesion, pathology and prognosis, further investigations and treatment as appropriate.
- Assesses clinical and physiological findings and communicates the findings with patients or colleagues effectively.

Transcranial magnetic stimulation (TMS)

- Leads the multidisciplinary team in the investigation of motor pathway function and central motor conduction time
- Utilises recording electrodes and TMS stimulators, and understands how and why they work.
- Ensures quality assurance through audit and quality improvement projects.
- Recognises electrical artefacts and knows how to overcome them.
- Assesses referrals for likely diagnosis and recommends appropriate investigation protocols
- Understands and takes account of medication and its effects.
- Assesses clinical and physiological findings, and formulates and produces a report detailing likely diagnosis, anatomical location of a lesion, pathology and prognosis, further investigations and treatment as appropriate.
- Assesses clinical and physiological findings and communicates the findings with patients or colleagues effectively.

Suggested documentation:

- Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR)
- Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
- Reflective practice entries about patients or families who posed difficulties
- Direct observation of procedural skills such as DOPS (**three** per procedure)
- Logbook with lists of procedures performed
- Minimum of **one of each** of the below supervised learning events (SLEs):
  - CbDs
  - Mini CEXs
- Quality improvement activity, such as a QIPAT