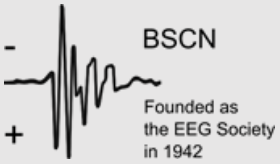
Clinical Neurophysiology

Induction Booklet

First Edition 2023

BSCN

ATCN



Contents

Disclaimer

This Induction Document has been provided as a source of help, or signposting, requested by trainees. There are numerous links to external sources, such that this document can never be fully up to date as those sources change. You are therefore advised to always check the original sources, and not to rely on this document for important decisions.

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Reviewed by BSCN Council 2023

Do you have comments?

Despite best efforts these documents are never perfect. If you have comments, or suggestions, please be in touch:

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1. Welcome!

Congratulations on your appointment as a trainee in clinical neurophysiology and welcome to Clinical Neurophysiology in the UK. We hope that your time as a registrar is rewarding, educational and fun.

This National Induction Booklet is designed to give you an overview of how Clinical Neurophysiology is organised in the UK, and your role within this team, both locally and nationally. The goal is to provide you with a simple introduction to your training and the environment you will be working in. We have included some tips on completing your e-portfolio, plus useful educational resources.

Of course, you will also have a local induction, where you will learn more about your local clinical team, local hospital policies, mandatory training and the Deanery in which you are working.

Occasionally, trainees need to raise issues or get help and we have included some suggested resources at the end.

We hope this is a practical and useful introduction, and we wish you a happy and successful training. We are a small, friendly specialty and we encourage you to get involved – there are many opportunities!

2. Statement on equality, diversity and inclusion

The BSCN, along with General Medical Council and Royal College of Physicians, are committed to promoting equal rights and opportunities, proactively tackling discrimination or disadvantage in all forms and creating an open and inclusive culture for all our members and trainees. This extends to the other healthcare professionals and patients with whom we interact. Inclusive working and training environments are crucial to doctors' wellbeing and safe patient care.

This has been adapted from statements by the General Medical Council (https://www.gmc-uk.org/about/how-we-work/equality-diversity-and-inclusion), British Medical Association (https://www.bma.org.uk/about-us/equality-diversity-and-inclusion) and Royal College of Physicians (https://www.rcplondon.ac.uk/news/rcp-reports-progress-improving-diversity-and-inclusion).

3. The local Clinical Neurophysiology team

The staff around you will vary widely depending on where you work and the size of the department. This is the briefest of introductions so you are aware of some background.

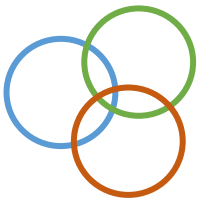

Figure 1. A schematic to demonstrate the overlapping interaction between Clinical Physiologists (orange), Administrative Support (green) and Doctors (blue).

Clinical Physiologists: The role of the clinical physiologist has expanded dramatically over the years and continues to grow. They complete their own specialist training and they have their own professional society (ANS, The Association of Neurophysiological Scientists https://www.ansuk.org) and regulation body (The Health and Care Professions Council, HCPC). There is close interaction between the BSCN and the ANS, including, sometimes, holding joint events and national audits.

Physiologist training (see https://www.ansuk.org/careers/): After the Department of Health introduced the Modernising Scientific Careers programme (onset 2010-14), clinical physiologists have been in a combined training scheme for 'Healthcare Science', and more specifically, with Audiology, Ophthalmic and Visual Science under ' Neurosensory Sciences'. There are 4 levels intercalating academic and workplace learning:

1. Assistant/Associate
2. Practitioner Training Programme (PTP) – BSc Honours Degree
3. Scientific Training Programme (STP) – Postgraduate, leading to an MSc Master's Degree
4. Higher Specialist Training (HSST)

Common physiologist roles: Like doctors, the roles that physiologists adopt are varied, according to their training, wishes and local opportunity, as illustrated in the following examples.

- Physiologists perform inpatient and outpatient EEG and sleep recordings. They often provide critical details of the history and testing, and have experience in interpreting video and EEG.
- Physiologists perform nerve conduction studies, commonly for carpal tunnel syndrome, ulnar neuropathies (sometimes peripheral neuropathies) and some have other specialist roles, too. These are commonly in parallel with a consultant in Clinical Neurophysiology but not always.
- Physiologists run video-telemetry units, ensuring good recordings, good patient testing, reviewing recordings and helping present results. Also, they often manage the unit and ensure good communication e.g. with telemetry nursing staff.

- Intraoperative monitoring is commonly performed independently by physiologists, including monitoring spine and complex brain operations, and communicating with the surgical team. Commonly, services are also overseen by a consultant in Clinical Neurophysiology but not always.
- Physiologists record evoked potentials, including on ITU and outpatients.
- Some physiologists gain scientific qualifications and run, or collaborate on, research projects.
- Most departments have a lead physiologist, who often takes on a substantial management role, often in collaboration with the lead consultant.

Administrative support: No department can function without good administration, and there are staff at the front desk who have a critical role in booking patients, greeting patients, ensuring they have information sheets, typing and entering clinical reports, sending them to referrers, fielding enquiries, generating statistics on waiting lists and so on. 'Simply' co-ordinating an inpatient transfer for EMG can be very complex, with communication between the ward, transport (both ways), infection checks etc. It becomes obvious why they need to know well in advance to cancel clinics for your holidays or to attend conferences (typically, minimum 6 weeks notice but check with your Deanery or Trust).

Doctors: You are likely to know this part already!

Clinical Lead: Within any department, there is usually one consultant who is the clinical lead, whose role is to help plan and deliver all Clinical Neurophysiology services within their local context.

Audit Lead: Depending on the size of the department, there may also be an audit lead (if not, there will be a neurology or divisional audit lead), who may or may not be the same person, and with whom you will plan your two audits/quality improvement projects.

Training Programme Director (TPD): Within your region (possibly in your department) the TPD, in addition to your direct Educational Supervisor, is responsible for the delivery of training and overseeing problems that any trainees may encounter. See Table 1 for a list of current TPDs by Region.

4. Clinical Neurophysiology in the UK

In the UK, Clinical Neurophysiology is a separate speciality, whereas in the USA, and in 21/32 European countries, Clinical Neurophysiology lies as a subspecialty within neurology. Other countries where Clinical Neurophysiology is considered a separate speciality include: Norway, Sweden, Finland, Spain and Portugal. Italy switched in 2017 to integrating clinical neurophysiology within a 4-year neurology residency program (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8654600/).

Clinical Neurophysiology departments tend to be based in larger hospitals and can sit across divisions, commonly managed within the neurology framework, but sometimes managed under neurosurgery, rheumatology, orthopaedic, radiology or paediatric management structures. It is a predominantly diagnostic speciality and generally follows the 6-week diagnostic wait in the Referral To Treatment (RTT) targets.

Further information about the structure and demands on Clinical Neurophysiology in the UK is contained in the Getting It Right First Time (GIRFT) Neurology report accessible at https://gettingitrightfirsttime.co.uk/medical_specialties/neurology/ .

BSCN

The British Society for Clinical Neurophysiology (see https://www.bscn.org.uk/) is our national society and it is a medical charity whose aims are: "to promote and encourage for the public benefit the science and practice of clinical neurophysiology and related sciences". The BSCN celebrated its 80th anniversary in 2022 having been set up initially as 'The EEG Society' in January 1942 – the first neurophysiology society in the world.

All registrars training in Clinical Neurophysiology are encouraged to become BSCN members (by joining via the BSCN website) to benefit from the discounts and sponsorship schemes, and to be informed about national and international developments of interest and meetings. The society has many roles, including planning and delivering neurophysiological services across the UK and relevant education, as illustrated in the following examples.

- **Scientific meetings:** There are two scientific meetings per year: in spring and autumn. Presentation at one is encouraged at some point in training and could, for example, reflect a research study or a particularly interesting and relevant audit.
- **Education:** You are encouraged to visit the BSCN website, where, after logging in, you will see education resources that include example evoked potentials to report, difficult cases to discuss, suggestions of books and web links to other relevant societies.
- **Triannual Oxford residential neurophysiology course:** All trainees are strongly encouraged to attend at least once during their training.
- **Council:** There are several roles on the BSCN council to aspire to including president, secretary, treasurer and many others. Whilst these are for practicing consultants, the Association of Trainees in Clinical Neurophysiology (ATCN) president, and sometimes other

members of the ATCN council, are co-opted members on council to voice your concerns and discuss training issues.

ATCN

The Association of Trainees in Clinical Neurophysiology (ATCN) was formed by trainees for trainees. All registrars would benefit from joining the ATCN mailing list, ATCN WhatsApp and ancillary support groups on joining the BSCN by emailing info.atcn@gmail.com . Some of the activities it has helped organise over the years include: Case-of-the-month, SpR-teaching sessions, subscriptions for learning resources e.g. American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM), Buddy-scheme, Mentorship for junior doctors into the specialty. As of 2023, the ATCN Committee has seven distinct roles:

President – attends the SAC meetings, JCNC meetings and BSCN Council meetings; is a port-of-call for peer-to-peer related queries other than Treasury and Education; oversees trainee's input to documents to be published (e.g. support schemes, induction documents etc).

Vice-President – attends the SAC meetings, JCNC meetings and BSCN Council meetings if the President is not able to attend; is a port-of-call to trainees, provides input to documents to be published.

Treasurer – works with the ATCN committee and BSCN Treasurer to raise and spend money for the benefit of ATCN members. This includes, but is not limited to, educational resources for trainees and subsidised ATCN socials.

International Representative (to IFCN) – is a port-of-call for international placements and other related queries.

Fellows Representative – is a port-of-call for non-training programme Clinical Neurophysiology fellows who aim to achieve CCT-equivalence in the specialty.

Educational Lead – is a port-of-call for education initiatives e.g. SpR-run teaching, training courses, Mentorship and Buddy schemes.

Webmaster – compiles and maintains an up-to-date repository of learning resources; liaises with BSCN Webmaster.

If you would like to get in touch, e.g. you are interested in supporting the ATCN in one of the above roles, or a new role that you think may be of benefit or you would like to recommend a useful learning resource for subscription, then please get in touch at info.atcn@gmail.com.

JRCPTB and the 'SAC'

The Joint Royal Colleges of Physicians Training Board (JRCPTB) develops training, including curriculum design and implementation, and development of the ePorfolio. The evidence gathered allows the General Medical Council to award a Certificate of Completion of Training (CCT).
The Clinical Neurophysiology curriculum can be found on the JRCPTB website:
https://www.jrcptb.org.uk/specialties/clinical-neurophysiology

For each of the 29 medical specialties and 3 subspecialties, there is a Specialist Advisory Committee (SAC) whose role is to contribute to development of specialist training policy, curricula, performance assessment and so on. The SAC is made up of the Training Programme Director (TPD) from each region where training is delivered, a lay member, trainee representative, chair and representative of the postgraduate deaneries.

JCNC

The Joint Clinical Neurosciences Committee is a standing committee established jointly with the Royal College of Physicians of London (RCP), the Association of British Neurologists (ABN), the BSCN and the British and Irish Association of Stroke Physicians (BIASP). Its role is advisory rather than executive and has accountability to each of its parent bodies.

IFCN

Started in 1947 as the International Congress for EEG, the International Federation of Clinical Neurophysiology (IFCN) promotes best practice in clinical neurophysiology through education and research throughout the world. From a registrar's perspective, particular points of interest are the conferences (International Congress of Clinical Neurophysiology, ICCN), special interest groups and educational resources online. There is a specific European Chapter and meeting, with updated information on their website https://www.ifcn.info/ .

5. The structure of training in Clinical Neurophysiology in the UK in brief

Clinical Neurophysiology is a 'Group 2 speciality' and does not dual accredit (there is no general medical component). Entrance can be through general medicine, paediatric or surgical training. Higher specialty training will normally be completed in 4 years full-time training, or the equivalent at less-than-full time. However, if needed, there is an option to extend training according to the Reference Guide for Postgraduate Specialty Training in the UK (The Gold Guide available at https://www.copmed.org.uk/gold-guide/gold-guide-9th-edition) and, exceptionally, the training time can also be shortened if all competencies are met.

Curriculum

The curriculum has a small number of 'capabilities in practice' (CIPs) which are based on the concept of entrustable professional activities (EPAs). In addition, the GMC has mandated that all postgraduate curricula must incorporate the essential generic capabilities required by all doctors as defined in the Generic Professional Capabilities (GPC) framework (https://www.gmc-uk.org/education/standards-guidance-and-curricula/standards-and-outcomes/generic-professional-capabilities-framework).

Assessment

The assessment systems have been mapped onto the clinical neurophysiology curriculum. You will notice that assessment includes workplace-based assessment (WPBA) and knowledge-based assessment (KBA). Trainee progression is assessed using many strands of evidence and recorded at the Annual Review of Competence Progression (ARCP). The evidence is wide ranging and made clear in the Clinical Neurophysiology Decision Aid available at https://www.jrcptb.org.uk/specialties/clinical-neurophysiology . There are many different outcomes from ARCP, which can be reviewed on your local Deanery website (for example, for the East of England, at https://heeoe.hee.nhs.uk/revalidation/assessment/arcp-outcomes).

'Deaneries'

Health Education England https://www.hee.nhs.uk/ has teams that provide postgraduate medical and dental training. They used to be 'Deaneries' (and are still commonly called this) but may also be referred to as the Postgraduate Medical and Dental Education (PGMDE) or Healthcare Education Teams (HET). There are, for example, 12 within England, and similar arrangements for Wales, Scotland and Northern Ireland (Figure 2). They arrange local delivery of your curriculum, assessments, administer leave arrangements and provide sources of support.

England

There are now 4 LETBs (Local Education Training Boards) in England.

North

There are three teams in the north of England:
North East, including north Cumbria - https://madeinheene.hee.nhs.uk/
North West - https://www.nwpgmd.nhs.uk/
Yorkshire and the Humber - https://www.yorksandhumberdeanery.nhs.uk/

Midlands and East

There are three teams covering the midlands and east of England:
East Midlands - https://www.eastmidlandsdeanery.nhs.uk/
West Midlands - https://www.westmidlandsdeanery.nhs.uk/
East of England - https://heeoe.hee.nhs.uk/

London

There is a single healthcare education team (HET) that covers London:
London - https://london.hee.nhs.uk/

South

There are five teams covering the south of England:
Kent, Surrey and Sussex - https://www.kssdeanery.ac.uk/
South West: Peninsula region - http://www.peninsuladeanery.nhs.uk/
South West: Severn region - http://www.severndeanery.nhs.uk/
Thames Valley - http://www.oxforddeanery.nhs.uk/
Wessex - http://www.wessexdeanery.nhs.uk/

Scotland, Ireland, Wales

NHS Education for Scotland - http://www.nes.scot.nhs.uk/
Northern Ireland Medical and Dental Training Agency - http://www.nimdta.gov.uk/
Wales Deanery - https://www.walesdeanery.org/

Figure 2. UK training regions. Accessed on 15.03.2023 at: https://specialtytraining.hee.nhs.uk/portals/1/Content/Resource%20Bank/Inter-Deanery%20Transfer/UK%20Training%20Region%20Websites.pdf

Training Programme Directors 2023	
Wessex	Dr Abena Osei-Lah
West Midlands	Dr Andrew Lawley
East of England	Dr Andrew Michell
NHS Education for Scotland	Dr Arup Mallik
Wales	Dr Gareth Payne
Northern	Dr Mark Baker
Oxford	Dr Mkael Symmonds
London (South)	Dr Nandini Mullatti
Mersey	Dr Ranjit Ramdass
Severn	Dr Sabine Klepsch
London (North)	Dr Stewart Boyd
Yorkshire and Humber	Dr Taimour Alam

Table 1. Current Training Programme Directors (2023).

Neurology Training

Neurology training amounts to approximately one quarter of the Clinical Neurophysiology training programme. Different regions allocate this in different ways. For example, one trainee may be doing two six-month blocks of neurology over the four-year programme while another trainee does 1.25 days every week for four years. A post-CCT-in-Neurology trainee may end up doing only 3 years of Clinical Neurophysiology. Typically, Clinical Neurophysiology trainees will do one or more Neurology outpatient clinic in one of the following: General Neurology, Epilepsy, Neuromuscular, Vision and/or Paediatric Neurology, amongst others. Other Neurology experience has included Neurology ward referrals, inpatient Neurology and Neurology on-call. The available options depend on the resources, hospitals, other trainees (e.g. in Neurology) and other factors within the region. Your Educational Supervisor and TPD will be able to provide you with specific information about your region.

Remote Working

There is increasing reliance on remote reporting in Clinical Neurophysiology and virtual clinics in neurology. In clinical neurophysiology this is increasingly common for video-EEG. Of course, there are many relevant issues to do with training, supervision and workplace-based assessment, and, at the time of writing, a statement is expected from the BSCN.

Annual Leave

Annual leave entitlements are agreed nationally and a useful summary can be found on the BMA website at https://www.bma.org.uk/pay-and-contracts/leave/annual-leave-entitlement/doctors-

annual-leave-entitlements . Many Trusts and departments require 6 weeks notice for annual leave to allow suitable changes to clinics and other programmed activity. In many regions, it is the trainee's responsibility to arrange swaps and cover for their period of study and/or annual leave etc. (please check at your Local Induction).

Study Leave

Applications for study leave, as well as the funding of this study leave, are made to your local Deanery (usually via a form signed by your Educational Supervisor to approve it). In general, trainees can take up to 30 days study leave per year, and mandatory training days (e.g. ATCN days) count towards this total. Your local Deanery also allocates the funding for study leave, which is commonly approximately £600-1000/year (please check with your local Medical Education Unit and Deanery). In general, they fund activities that are designated as 'mandatory' to achieve training competencies (ATCN training days are commonly in this category), but 'aspirational' activity may not always be funded. It is worth explaining special circumstances to your Deanery, with the support of your Educational Supervisor or Training Programme Director since there is often some degree of discretion. In addition, ask within your department whether there are any funds to help with training costs – some departments are able to top up training funds. Some potential sources of funding also include BSCN sponsorship, sponsorship to ILAE events, bursaries for attending the ECCN and IFCN, amongst others (e.g. some charities).

You are encouraged to discuss study leave requests with your educational supervisor and factor them into your Professional Development Plan at the beginning of the year whenever possible. If you have trouble obtaining study leave then you can also approach your Training Programme Director.

6. Training tips

a) Obviously it helps to keep a close eye on your training requirements and the 'hurdles' you have to clear to demonstrate competency so you can pace/plan your training. It is obvious to say, but divide up the curriculum across the total time you have (usually 4 years) to work out approximately the number of cases you should be seeing, DOPS to do and so on per year, with reference to the ARCP Decision Aid. The Curriculum lists the indicative procedures and numbers expected to be completed over the four years of training: p.28 of https://www.jrcptb.org.uk/sites/default/files/Curriculum%20for%20Clinical%20Neurophysiology%20Training%20%28V7%29%2013072020_0.pdf The Decision Aid helps define requirements at each ARCP so you can ensure you meet them (https://www.jrcptb.org.uk/sites/default/files/ARCP%20Decision%20Aid%20Clinical%20Neurophysiology%20FINAL%20July%202021%20updated.pdf). Remember to go easy on yourself in the first year, everyone is slower at the start.

b) A few weeks before your ARCP, ensure you have completely updated your e-portfolio, including updating and uploading your logbook, form R (both parts), grade of training calculator, completion date calculator, ensuring there is evidence of reflective practice and attended courses/training, evidence of any research/teaching and that the necessary DOPS and other assessments are visible. It is best to do this before the meeting with your educational supervisor so you can go through the curriculum (on e-portfolio) and assess competencies together. Your supervisor can then get their educational report written and completed comfortably ahead of the ARCP.

c) Think early about whether you are likely to want to have time out of training for any reason – research, a fellowship, and so on. Plan early so you can agree funding and agree the time out of training with your department and your Deanery.

d) Make full use of the collaboration that exists within the ATCN and also with other consultants in the BSCN. Some registrars like to co-learn with colleagues, including group teaching. Use the online resources below too. If you know it will be difficult to meet all curriculum competencies in your region flag it early to get a solution – others will have done so in the past and there will be consultants in other regions happy to help.

e) **BIG TIP**: trainees are often slow to plan their consultant jobs. It is worth thinking about this 18 months before your CCT. By that stage, you will have a good feel for what mix of work you would like and where, ideally, you would like to live and work. Once you know this, go and talk to the consultants who already work there and ask about opportunities. Don't only look at advertised jobs. There are often unfilled PA's in a department, or development opportunities, which, with the right candidate (you!), can be developed, but they are not advertised. But approving a job in the NHS is slow. Remember you are eligible for consultant interview up to 6 months before your CCT, so the job can be advertised a few months before that. Therefore, given the time taken for prior discussion and business planning, 18 months

is not unreasonable…

f) Unpredictable things happen and training is not always smooth. If you run into difficulties, flag them early since it makes it far easier to help and reach a resolution. There are many sources of help, but it makes sense to start locally (see section below). Ideally, begin with your Educational Supervisor and Training Programme Director, so that a plan can be made more concrete at your next ARCP.

7. Training Resources

This section provides a summary of relevant training resources that existing trainees have found helpful and compiled. Please suggest useful additions or removals. Also check the BSCN website: https://www.bscn.org.uk/members_content_wide.aspx?Group=members&Page=educationhome

Popular Books:

General Neurophysiology

- Electrodiagnosis in clinical neurology, 6th edition
- The Clinical Neurophysiology Primer
- Clinical Neurophysiology (Contemporary Neurology Series)
- Clinical Neurophysiology Board Review Q&A

Neurology

- Bradley's Neurology in Clinical Practice, 2-Volume Set, 7th Edition
- Adams and Victor's Principles of Neurology 11th Edition

NCS/EMG

- Electromyography and Neuromuscular Disorder, 4th Edition
- Electromyography in Clinical Practice 3rd Edition
- Electrodiagnosis in Diseases of Nerve and Muscle: Principles and Practice, 4th Edition
- Manual of Nerve Conduction Studies, 3rd Edition
- Manual of Nerve Conduction Study and Surface Anatomy or Needle Electromyography, 4th Edition
- Anatomical Guide for the Electromyographer: The Limbs and Trunk, 5th Edition
- Aids to the Examination of the Peripheral Nervous System: (6th edition)
- Paediatric Electromyography by Matthew Pitt 2018

EEG

- Niedermeyer's Electroencephalography: Basic Principles, Clinical Applications, and Related Fields
- Handbook of ICU EEG Monitoring
- Handbook of EEG Interpretation
- Practical Approach to Electroencephalography, 1e
- Current Practice of Clinical Electroencephalography
- Hirsch and Brenner's Atlas of EEG in Critical Care
- Rowan's Primer of EEG, 2nd Edition
- Atlas of EEG patterns
- Atlas of Neonatal Electroencephalography
- Atlas of Paediatric EEG
- Artifacts in Clinical Neurophysiology

EPs

- Illustrated Manual of Clinical Evoked Potentials

IOM

- A Practical Approach to Neurophysiologic Intraoperative Monitoring, 2nd Edition

Sleep

- Oxford Textbook of Sleep Disorders

Neuroanatomy

- Neuroanatomy through Clinical Cases with ebook

Neuroscience

- Principles of Neural Science, Sixth Edition

Websites:

- eBrain https://www.ebrain.net/
  NOTE: all BSNC members have free access to Ebrain, which can be granted via Louise, the BSCN administrator (louiseannjones@btinternet.com)
- BPNS https://www.bpns.org.uk/
- AANEM: https://www.aanem.org/Login?returnurl=%2fHome
- ILAE: https://www.ilae.org/
- Washington University in St. Louis Neuromuscular Home page: https://neuromuscular.wustl.edu/
- EPICARE: https://epi-care.eu/
- European Reference Network- NMD: https://ern-euro-nmd.eu/webinars/
- IFCN: https://www.ifcn.info/masterclass.asp
- Natus Neuro Training Academy: https://natus.com/education
- Nandedkar EMG learning resource: https://www.nandedkarproductions.com/
- BSCN online learning: https://www.bscn.org.uk/
- Erik Stalberg (EMG and SFEMG teaching): http://www.erikstalberg.com/teaching.aspx#emgcoursemay2017
- BPNA: https://bpna.org.uk/
- Newborn Brain Society: https://newbornbrainsociety.org/

Highly recommended courses:

- Courses run by BSCN or local 'Deanery'
- ATCN training days (see BSCN website)
- One of the Motor Evoked Potential (magnetic stimulation) courses run in Southampton or Newcastle during your training, especially if your region does not perform magnetic stimulation.
- Teaching the Teachers course (ask your Trust's Education Learning Centre as many can offer it for free)

- Leadership and Management Courses can often be provided locally for free, so check what is available. You can also gain management experience by attending local management meetings and arranging real-life experience (a course is not compulsory)
- The Triennial BSCN week course (in Oxford) once during your training

Other courses:

- International Paediatric EMG course
- ILAE Neonatal EEG course
- Moorfields Electrophysiology of Vision course
- Intraoperative monitoring or brain mapping course(s), for example run by Inomed
- Interview-skills courses are not essential but some trainees find them helpful

Journals:

1. General Clinical Neurophysiology
    - Journal of Clinical Neurophysiology: https://journals.lww.com/clinicalneurophys/pages/default.aspx
    - Clinical Neurophysiology Practice: https://www.sciencedirect.com/journal/clinical-neurophysiology-practice

2. Neurology
    - Neurology: https://www.neurology.org/
    - Practical Neurology: https://pn.bmj.com/?utm_source=google&utm_medium=ad&utm_campaign=usage_search&gclid=CjwKCAiA5Y6eBhAbEiwA_2ZWIdBIZdnqbHlBJUSbIb0sgYBwBpBYGUT4O-mHbQSRnw5X8AVZFvjpAhoC698QAvD_BwE
    - Lancet Neurology: https://www.thelancet.com/journals/laneur/home
    - Continuum Neurology: https://journals.lww.com/continuum/pages/default.aspx
    - Brain: https://academic.oup.com/brain/pages/About
    - Current opinion in Neurology: https://journals.lww.com/co-neurology/pages/default.aspx

3. Neuromuscular
    - Muscle and Nerve: https://onlinelibrary.wiley.com/journal/10974598
    - Neuromuscular Disorders: https://www.sciencedirect.com/journal/neuromuscular-disorders

4. Epilepsy
    - Epileptic Disorders: https://onlinelibrary.wiley.com/journal/19506945
    - Epilepsia: https://onlinelibrary.wiley.com/journal/24709239?utm_source=google&utm_medium=paidsearch&utm_campaign=R3MR425&utm_content=Medicine&gclid=CjwKCAiA5Y6eBhAbEiwA_2ZWIVYPZxyHNDdF_slX0BPSl8FF74Cw3FCfypC5JNmcPEKzKxLE-xAdyxoCUwcQAvD_BwE

5. Paediatric Neurology
    - Paediatric neurology: https://www.amazon.co.uk/Practical-Approach-Electroencephalography-Mark-Libenson/dp/0750674784
    - European Journal of Paediatric Neurology: https://www.elsevier.com/journals/european-journal-of-paediatric-neurology/1090-3798#description

6. Sleep medicine
    - Sleep medicine: https://www.sciencedirect.com/journal/sleep-medicine

8. Opportunities within training

The Clinical Neurophysiology training programme lasts 4 years when completed full time, without breaks. Many trainees, however, choose to work less than full time, and/or to extend their training time with research, fellowship(s) and other activities. The list below can never be exhaustive but may provide interesting thought and inspiration.

If you are interested there are some common-sense general principles you should follow to boost your chances of having your special request accepted:

1. plan as far ahead as you can;
2. check first on the process required on your local Deanery website;
3. discuss your plans early with your Educational Supervisor and Training Programme Director.

Less Than Full Time (LTFT) training

Any trainee in a substantive HEE training post can apply to train LTFT, although there are eligibility criteria, and your local Deanery website will provide clear details of these and how to apply. In general, there is a 12-week notice period. It is common that applications are grouped according to categories:

- Category 1 – caring for children, personal health reasons, direct carer for a dependent
- Category 2 – unique opportunity for professional development, short term extraordinary responsibility, religious commitments
- Category 3 – personal choice

If you are interested, and would like further advice, start by looking on your Deanery website, where there will be an application form, and discuss it with your Training Programme Director and Educational Supervisor, ideally at least 4 months in advance. If you would like to read the basic principles, they are in the Gold Guide https://www.copmed.org.uk/gold-guide/gold-guide-9th-edition .

Out of Programme (OOP) experience

Again, please consult your local Deanery for detailed information, this is just the briefest overview. Generally, time spent OOP does not contribute to the 4-year training programme, but you retain your training number whilst OOP. The exception to this is an OOPT (Out of Programme Training) and OOPR (Out of Programme for Research). The latter is generally for up to 3 years, with the intention of gaining a higher degree, and it can contribute up to 1 year towards the 4-year training for CCT. There are other special types of Out of Programme activity (for experience, career breaks and so on).

It is generally recommended that trainees discuss OOP plans with their Training Programme Director at least 6 months in advance (ideally longer). Trainees may have to wait to start an OOP placement, and it is commonly at rotation dates.
For further information, please see: https://www.gmc-uk.org/education/standards-guidance-and-curricula/guidance/out-of-programme

Acting up as a Consultant

Trainees in their final year of training can apply to act up as a consultant for a minimum of 3 months, which can count towards their training. It is commonly structured as an Out Of Programme for Training.

Inspiration, what have others done?

Remember, many additional skills can be gained alongside the 4-year clinical neurophysiology training programme, without taking time out.

- Fellowships, for example epilepsy or neuromuscular fellowships, anywhere in the world, for up to a year. If they give valuable experience they may, for example, be classified as an Out of Programme for Experience (OOPE). You will need to consider funding.
- Entrepreneurship, for example via the NHS Clinical Entrepreneur Programme https://nhscep.com/
- Leadership and management development for doctors in postgraduate training https://www.leadershipacademy.nhs.uk/resources/leadership-development-for-doctors-in-postgraduate-training/
- NHS regional clinical Leadership Fellow Scheme https://www.fmlm.ac.uk/clinical-fellow-schemes/nhs-regional-clinical-leadership-fellow-scheme
- Darzi Fellowships in Clinical Leadership https://www.lsbu.ac.uk/business/research-enterprise-and-innovation/health-systems-innovation-lab/what-we-do/darzi-fellowship-challenge
- Postgraduate Certificate in Medical Education is popular, generally taught over 1 year, and aimed at doctors who would like to take on a teaching role. There are many providers across the UK and online.
  https://www.bmj.com/content/337/bmj.a880

Why not try and win the BSCN's own Adrian Prize for the best presentation at the BSCN, worth £1000, for details see https://www.bscn.org.uk/index.aspx?Group=home&Page=home

9. Return to training

If you decide to take an out-of-programme (OOP) period, including parental leave, it is worth ensuring you plan not only the leave, but also your return to training.

You should have a meeting with your educational supervisor to plan the approach and look at what your local Deanery provide as support. It is common for this to include Keeping in Touch (KIT) days (usually up to 10 KIT days per parental leave without it affecting parental-leave pay), and there are commonly supportive courses on returning to work (see below). When you return, you should have a meeting with your Educational Supervisor to ensure you are supported, and to help set some short-term goals to get back into the swing of working. This may well include a brief follow-up meeting to ensure you are making appropriate progress, and to provide any other support, or to highlight where that can be found.

For maternity leave and related issues (e.g. equal pay opportunities and less-than-full time training), it may be useful to join the Physician Mums Group PMGUK (https://www.facebook.com/groups/722674887906491/https://www.facebook.com/groups/722674887906491/), which can provide useful peer advice.

For instance, for London trainees:

Please visit https://london.hee.nhs.uk/professional-development/supported-return-to-training

Please register to attend one of the return-to-training set of sessions on the v-space website: https://london.hee.nhs.uk/v-space-supportt-trainees-2022

In London the relevant forms: https://lasepgmdesupport.hee.nhs.uk/support/tickets/new?form_38 (also available at https://london.hee.nhs.uk/professional-development/supported-return-to-training). There is funding available for attendance of courses and conferences (and general support for return-to-training) so you should specify this on the form.

10. What sort of consultant job would I ideally like?

This may seem like a daft question, but there are two good reasons for considering this early:

1. Most trainees have a preference about where, geographically, they would like to work and what their favourite bit of neurophysiology is (or will be).
2. It is not uncommon for neurophysiology centres to have some 'spare' PA's, a vacant job, or the ability to create jobs. But remember it takes time for jobs to be created, approved, advertised and for you (hopefully!) to be appointed.

Therefore, do start to make waves early, perhaps 18 months before your CCT date. Go and talk to the team, or teams, in the region you would ideally work in. Do they have jobs coming up? Can they consider creating something new? What are the opportunities? It'll help to have a basic CV, and to be able to discuss what interests you and, of course, you will need to be flexible to some degree.

What things do you need to think about?

1. Location – where do I want to work?
2. Do I prefer a teaching hospital or DGH environment, or a mix? Working alone or with others?
3. Do I prefer a single site or split site?
4. Mixed job, or highly specialist job (e.g. purely telemetry/EEG, purely paediatric and so on)
5. Any neurology component, such as clinics in epilepsy, or neuromuscular?
6. Any special interests: research PA's, education role, others

If you are unsure, have a chat with a mentor and colleagues.

11. Sources of help

Of course, during the training many doctors will encounter personal or professional challenges of different sorts, and some will wish to seek help. We cannot hope to cover all eventualities here but are providing links to resources and suggestions, which may provide a useful starting point. If we have missed anything that may be particularly helpful then please let us know.

In all branches of medicine there are, unfortunately, reports of bullying, harassment or discrimination. Such behaviour is, of course, entirely unacceptable within Clinical Neurophysiology, and the NHS, nevertheless, we may still come across it in some form. This booklet was made together with consultants and trainees in Clinical Neurophysiology as part of fostering a close and open relationship within the workplace. There are several possible sources of help, both formal and informal, local and national. Your approach to this will, of course, depend on your personal experience and preferences. Some, but not all, issues may be improved by discussion and resolving the issue informally in the first instance. Consider keeping a record of the events, and any relevant written communication. The resources below provide some suggestions but are not exhaustive.

Local resources

Your employing organization carries legal responsibility for bullying and harassment issues. If you are not sure who your employer is, then check your payslip. Consider a number of contacts who can help locally:

- Consider discussion with a senior colleague in your department whom you trust. This may be an Educational Supervisor or Training Programme Director, but it need not be. It could also be a manager if you feel appropriate.
- Consider discussion with a trusted senior colleague in a different speciality within your hospital. They can help guide you to local help and support.
- Human resources (HR, medical staffing)
- Occupational Health
- Freedom to Speak up Guardian
- Guardian of Safe Working
- The Postgraduate Centre will have Medical Education Managers, and there are College Tutors and Clinical Tutors

Local Deanery

In general, your local Deanery website is an excellent place to start. They will have a Professional Support and Wellbeing Service, able to provide local support covering lots of common problems including personal and professional. It commonly requires a referral to access some services, but a referral does not impact on your training progress. To some extent they act as a hub, with access to multiple other resources. Reasons for trainees to get help include:

- Health and Social
- Repeated exam failure
- Clinical performance, Knowledge and skills
- Communication, Team Working and Time Management
- Professional Behaviours and Attitude

- Significant Life events
- Environmental issues
- Engagement with Training

The sorts of support available include:
- Psychological Support
- Exam Support
- Communication Skills
- High level Careers Support
- Neurodiverse Screening
- Occupational Health Assessment
- Emotional Intelligence Screening

National resources within Clinical Neurophysiology

The ATCN organise a buddy system, and are a good port of call for informal peer-to-peer advice and support. It can be a good source of where to turn to next and may enable you to talk to someone who has had similar problems.

The national mentoring programme may be of interest, particularly for friendly career advice from a consultant not directly associated with your training. This is arranged via the BSCN/ATCN.

Role of the BSCN and the Specialist Advisory Committee (SAC)

The BSCN has worked to understand the perception of bullying, harassment and discrimination by trainees, and consultants, within the speciality. It does not have a role in individual cases, which are managed locally, but does have a role in minimising this across the speciality.

Actions taken so far:
1. In 2019, the Royal College of Physicians and JRCPTB National Trainee Survey provided data on the incidence of self-reported bullying, harassment and discrimination.
2. This was analysed in detail, and external help recruited from national leads in bullying and equality (not neurophysiologist), and results presented to the BSCN meeting March 2021.
3. Because of limitations of these data, a new survey specific to Clinical Neurophysiology was designed and completed in 2022. This showed the magnitude of the problem, type of bullying experienced and awareness of local support.
4. In addition, a survey of Training Programme Directors Dec 2021 showed local actions taken to minimise bullying, harassment and discrimination, compared to BMA and GMC recommendations.
5. These data have been re-presented to BSCN in July 2022.
6. Actions taken to try and improve on a national scale:
    a. generation of a national registrar induction booklet (this);
    b. establishment of a buddy system – ATCN Jan 2023;
    c. establishment of a national mentor system.
    d. raised awareness via BSCN, collaboration with ANS
7. Ongoing strategy work to embed Equality Diversity and Inclusivity within Clinical Neurophysiology management structures nationally and locally.

This is a work in progress. If you have suggestions, please do let us know – via the Quality Lead on the SAC, currently Dr Andy Michell.

National resources

- ATCN Buddy scheme was set up in January 2023 (see https://www.bscn.org.uk/data/files/ATCN/Buddy%20Scheme%20in%20Clinical%20Neurophysiology.pdf). Junior and senior trainees within Clinical Neurophysiology are paired in order to provide peer-level support for informal discussions and sharing of experience. If you would like more information about the buddy scheme or if you are interested in joining it then please email info.atcn@gmail.com with "Buddy Scheme" in the subject line.
- Local trainee representatives
- Whistle-blowing Advice and Helpline for NHS and Social Care

https://www.pcaw.co.uk/
http://www.nhsemployers.org/your-workforce/retain-and-improve/raising-concerns-whistleblowing/information-for-staff
https://www.citizensadvice.org.uk/health/nhs-and-social-care-complaints/whistleblowing-how-a-staff-member-can-report-a-problem-in-the-nhs-or-an-adult-social-care-service/

- BMA - Guidance on stopping harassment and bullying

https://www.bma.org.uk/advice/work-life-support/your-wellbeing/bullying-and-harassment

- NHS Employers - Guidance on bullying and harassment

http://www.nhsemployers.org/your-workforce/retain-and-improve/staff-experience/tackling-bullying-in-the-nhs

- National Advisory Group on Safety of Patients in England

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/226703/Berwick_Report.pdf

The End!

Please do feedback and contribute to the next edition of this document by writing a quick note to:
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